THE LITERARY GAZETTE;

AND

Journal of Belles Lettres, Arts, Sciences, &c.

No. 1128. LONDON, SATURDAY, SEPTEMBER 1, 1838. PRICE 8*d.*
Stamped Edition, 9d.

THE BRITISH ASSOCIATION.

EIGHTH MEETING: NEWCASTLE.

[Second notice.]

In looking back at the week of bustle and hurry which has just closed, we find ourselves wishing to be the Grainger of the scientific confusion and Babel. Could we thread and re-form all the multitudinous alleys and *chares* of which it has been composed, and present them on the plan of a well-arranged city, as he has done with the town of Newcastle, it might present as agreeable a contrast as is presented by his architectural works. And as useful, too; for we should merely shew the unimportant streets of houses and passages which lead from place to place, and reserve our means and strength for those more splendid elevations which serve to mark and crown the whole general design.

For this meeting, like all that have preceded it, and like all of which it may be the precursor, has consisted of much that is neither new nor of material consequence; but distinguished by a few features of interest to science and national value.

To the latter, and to matters of local character, especially in a district of such peculiar attraction to the mind in almost every thing that can worthily engage human attention,—antiquities, natural products, employment and industry, and physiology, in the widest sense—we shall more particularly direct our report, leaving the mass of subjects with which those acquainted with the existing state of science in its various branches are familiar through the periodical press, philosophical transactions, &c., &c., to that passing notice to which alone they seem to us to be entitled, in a historical point of view, as relates to the proceedings of the British Association during its Eighth Meeting at Newcastle-upon-Tyne.

Among the crowd which the snowball disposition of these meetings now collects in accumulated numbers, we regret not to see more foreigners of scientific pursuits and distinction. At this assemblage, where 1391 inhabitants of Newcastle and its vicinity were added to 895 non-resident visitors, making a grand total of 2286 members,* there were not above a sprinkling of foreigners of about half per cent! Some eight or ten representatives of Europe, Asia, and America. If there were very much to learn, we are inclined to think the attendance of such persons would be greater; and it is from this as well as other criteria that we should pronounce the British Association to possess more utility in the bringing together and conjoining in friendly intercourse the far-spread family of which it consists, than in eliciting novelties of any consideration in the progress of discovery and improvement. Another, however, of its most valuable effects, is in giving weight to objects too large for individual effort, causing them to be undertaken on public grounds; and, while private enterprise is stimulated by popular honour, an efficient impulse is communicated to undertakings worthy of an enlightened government and people.

The project of an expedition to the southern hemisphere (to which we shall advert as we come towards the end of the week's business), under the direction of that gallant and eminently distinguished officer, Capt. James Ross [who, by the by, deserves a mark of royal favour as highly as any man that ever graced the service, or displayed ability and zeal in the most arduous walks of science], is the principal matter of this kind which we remember to have been taken up by the Association, and we confidently look to its happy accomplishment as one of the greatest and most desirable of its achievements. The late Capt. Weddell's enterprise in that direction ought long since to have stimulated a great naval and commercial country to add discoveries towards the South to discoveries towards the North Pole; and we rejoice to see it at last likely to be put in train, under the auspices of so competent an officer as Captain James Ross.

We now resume our Report, and fall back on Monday.

SECTION A.—*Mathematics and Physics.*

The communication which followed Colonel Reid's,* was from Sir John Herschel, 'On the reduced Observations which he had made at the Cape of Good Hope, in 1835, 6, 7, on Double Stars and Nebula.' In this paper, illustrated by drawings, described the remarkable appearances of the southern heavens, and made striking *viva voce* additions to the brief technical notes which belonged to his catalogue of these stars. Some of the nebula were of extraordi-

* That is, 449 more than at Liverpool, the previously best attended meeting.

* This interesting paper, combined with other curious phenomena announced in several branches of physics, may suggest the idea that all things in Nature are rotatory and move in circles. With regard to the particular subject of storms, Professor Stevelly observed, it was one on which he felt the greatest interest; and at the meeting of the Association at Edinburgh, in 1834, he drew the attention of this section to the propriety of getting the log-books of merchant vessels collected; but he was answered, that such a thing was perfectly hopeless. Now, however, they saw one individual who had in a great measure performed the task himself. The learned professor proceeded to state his views on summer storms, and mentioned a singular circumstance experienced by Capt. Kotzebue, on the 10th of September, 1824. When sailing near California, in the Pacific Ocean, he suddenly found on each side of him two completely opposite winds within the space of a few fathoms of still water, in which he lay. As time wore on, the one current prevailed over the other, and he was brought into one of them which, fortunately, was proceeding in the direction of his own course. Now, in this case, the ship might have been lying on the one side of one storm, and on the opposite side of the other; or it might happen that the ship was at opposite sides of the same storm, and that the captain had misconceived his position. [This is a strong confirmation of Col. Reid's views.]

Colonel Reid said, he might mention a circumstance that occurred in the West Indies. Barbadoes is seventy miles eastward of St. Vincent's, and the trade-winds passed from one to the other. In 1831, the great storm passed between them at the rate of only seven miles an hour; the destructive force of the current was owing to its rotatory velocity, which might be a hundred miles an hour. He found, on investigating all other storms, that they moved onward at slow rates, so that it not unfrequently happened that a ship ran into the heart of a storm, by moving at greater speed, whereas if the crew had shortened sail, the storm would have gone on before them. He should now repeat, that ships' logs, instead of being the dry, uninteresting things they were usually considered, were often deeply interesting, as connected with the fate of our brave sailors who had foundered in storms. He had found recorded, for instance, in the log of the Harriet, the last signal made during a heavy storm by the brave old Admiral Troubridge.

Sir J. Herschel regarded it as a happy omen for the success of the meeting, that its proceedings should commence with one of the most enlightened communications he had ever heard. He congratulated that section, this country, and the whole world, on the prospect of having at length developed the real character of these terrible manifestations of the power of Him, whose word the storms obey. He need not dwell on the extreme advantage of knowing whether a man was in a storm, and how to get out of it; and one main point seemed to be simply to lie-to, and wait the event. The rotation of storms always in one direction was a certain indication that, on entering one, a seaman had better have the wind on one quarter than on the other. The central point of the storm was the point of greatest danger, where the ship was thrown on her beam ends. A seaman ought to know whether he was going into or coming out of a storm; and supposing he were inclined to stay, he should at least know how to turn the ship's head. A curious fact attending the rotatory course of storms, was the parabolic nature of the curve described. It was usually elliptical, and almost all storms were confined within a comparatively narrow compass. It was clear that a mariner might know in what direction the body of the storm proceeded; and that of itself should suffice to indicate not only the course in which he was lying, but also in what course he was proceeding. There was one consideration connected with the parabolic curve of storms, which always appeared to him to have considerable weight, and that was, whether the influence of the gulf-stream might not have something to do with it. Its general curve seemed to lie in one direction; and whether the great current arising from that enormous mass of heated air did not disturb the equilibrium between the two great currents of trade-winds, the lower current being properly the trade-wind, and the upper current the anti-trade, was a point of considerable interest, and one which it appeared to him ought to be taken into account in instituting any theory regarding storms. He further thought, that this view of the matter seemed to be confirmed by the remarkable fact that there were no storms at St. Helena. Col. Reid had stated that he had no theory on this subject. However, it was always desirable to theorise. A little theory was often of great use, because it set people thinking, and the endeavour to controvert one theory not unfrequently led to the developement of another. The trade-winds proceeded N.E. and S.E. in a direction towards the equator; the current then turned upwards, and descended in latitudes beyond the trade. Hence, therefore, there were always two currents, the upper and the lower, running in contrary directions. In the S.E. trade, to the Atlantic, might be seen a constant, uniform, equable layer of clouds, in the space between these two winds. This was a calm between the wind rushing towards the equator; there becoming heated and ascending, returned, in its upper course, towards the pole. Now, let them suppose that some cause brought the opposing currents nearer to each other, and any sufficient object, such as a mountain, intervened, the two currents would begin to revolve; and this rotatory motion would have a tendency to produce a funnel-shaped depression, which might continue for some time after the producing cause had subsided. A familiar instance of this would be seen if a little hole were made in a tub, which would speedily cause the water to revolve rapidly, and become depressed towards the hole in the funnel shape which he had mentioned; and if the hole were suddenly stopped up, the motion would continue, but, after a time, not in the same direction, the currents would begin to mingle. Now something of this kind probably took place in the atmosphere, from some cause of sufficient magnitude to produce the effects which were witnessed. In illustration of the time which the rotatory motion thus imparted might continue, he might mention that if a gun were fired which had been greased in the mouth, a beautiful and elegant wreath of vapour would arise after the discharge, which would expand as it rose, and fluctuate to and fro, undulating with every breeze, but still preserving its annular appearance. Upon examining this ring carefully, every part of it would be found in a state of rapid rotation, from the centre outwards, so long as it existed. And he thought it was precisely the same thing with these storms, only the wreath was on a scale so minute as almost to admit of being handled. That water-spouts should deviate from the law of storms was to be expected. He supposed them to arise more from some local cause of disturbance, than from any great revolution in the currents of the atmosphere. Upon land they might be produced by local circumstances, such as a heated space of ground, which would force the current upwards; and he could imagine water-spouts revolving in either one direction or the other. With regard to Mr. Espy's theory, that in a storm the currents all pressed towards the centre, he conceived that in some conditions this would certainly be found erroneous; for it appeared difficult to suppose how the barometer could sink in that centre at which all the currents were heaped up. If currents had at all a tendency to revolve, that rotation must be greater in the inside of the circle than on the outside. The Hon. Bart. then alluded to the spots on the sun, &c., as noticed in our last more briefly than in this note.

nary forms. In one they looked like bunches of grapes, and in another, like bees swarming, so that it was impossible to define them. He also mentioned the vivid colours of some of the stars: one, in particular, was a fine blue, approaching to verditer green. Some were so close as to be inseparable; and others seemed as if they were groups framed by family compact. He expressed a hope, that glasses of higher powers than had hitherto been attained by human art, might hereafter be applied to the examination of these double stars, so as to ascertain their nature and motions, whilst changing their positions in every way, and often so as to occult each other. He had to notice generally of their distribution over the heavens, that there were fewer in the southern than in the northern hemisphere, and in the former that they mostly consisted of a larger and smaller star, which raised the question whether the lesser orbs were planetary, or had only a reflected light, like the earth's moon. Again, touching on the singular phenomena presented in the colours of these stars, generally yellow and red, he instanced the planet Mars, in our own system, as analogous to them, his red aspect being quite different from the yellow radiance whence he derived his brilliancy. The drawings of the nebula fully bore out Sir John's description of their being, like wisps and tails, thrown together over the face of the heavens.

In Section B. (Chemistry), the analysis of Professor Thomson's new preparation of lead, found in the neighbourhood of Newcastle, was

Protoxide of Lead	70·14
Arsenic Acid	18·20
Lead	7·10
Chlorine	2·46

And Mr. Richardson's analysis of sphene, from Norway—

Silica	31·05
Tartaric Acid	43·90
Lime	24·80
Water	1·00

SECTION G.—*Mechanics.*

Professor Babbage, in the chair, as president of the section, commenced by observing that the sectional committee had determined that no discussion should be taken as to who was the inventor of any machine, as that was not required by the objects of the Society.

The first paper, read by the secretary, was 'On an Improved Two-Arm Telegraph,' by Joseph Garnett, of Newcastle, a model and drawings of which were exhibited in the room. The telegraph is composed of two ladders, framed together, so that the bottoms are twenty-four inches asunder, and the top twenty inches. This constitutes the frame-work to hold the whole machinery. The front of one of the ladders is filled up with Venetian blinds, in order to make it appear at a distance as an upright post, and as being of that construction which will afford the least resistance to the wind. A long arm is fixed at the top of this frame-work, and moves on a pivot. A shorter arm is fixed a little lower down, and is also moved on a pivot. These arms are counterpoised by a leaden weight. The machinery consists of eight bevil mitre-wheels. Two spoke-wheels are fixed on a horizontal axis to turn the arms by, and the motion is communicated by a connecting rod. An apparatus is contrived for locking the wheel, thereby preserving the arms in one position. A dial-plate is fixed on the face of each wheel, on which are marked eight different figures, which refer to eight different positions of the arms. By turning the wheel till the point of the index is opposite the figure which indicates the position required, the arm will be immediately carried to that position. An inner or smaller circle of figures on the dial-plate denotes the position of the arms when viewed from behind. The diurnal telegraphic communication is effected by the position of the arms, of which there are fifty-six variations. The nocturnal telegraph is formed by fixing four lights in the form of a cross, and by attaching a light to the end of the long arm, the short arm not being used at all. The fixed lights are so combined as to be visible on both sides of the telegraph, by means of apertures left in the upright support, and also with flaps by which they can be covered when necessary. The covering is effected by wires brought down to the apartment of the operator. Fifty-six different arrangements of the lights may be formed so as to indicate numbers, and the numbers are of course understood by the parties who hold communication in this way. A series of diagrams were exhibited, shewing the various positions in which the arms could be placed.

The next paper was 'A Brief Notice of the Instruments, &c. to facilitate the Drafting of Objects in Isometrical Perspective,' by Thomas Sopwith, Esq., the object of which was to describe certain instruments and arrangements by which the operation of isometrical projection may be facilitated.

The third was 'A Description of an improved Method of Constructing large Writing Tables, adapted to save much time, and to secure a systematic Arrangement of a great number and variety of Papers, &c.' by the same ingenious gentleman. The principle upon which these writing tables are constructed is that by means of a single key the whole of the drawers, closets, and partitions, are opened: the various apartments are so disposed as to admit of being reached without stirring from the seat; they are entirely closed in a moment of time by means of a spring-lock; and the simplicity and strength of the whole is such, that it is no way liable to get out of order. The table constructed in the form of a cabinet.

The next communication was 'On the Power of Economising and Regulating Heat, by Mechanical Contrivance of Fire-Places and Chimneys,' by George Webb Hall. This paper was an account of the result of a series of experiments made by the inventor on the best mode of economising heat. The experiments which he had made, shewed that a contraction of the lower apartment of the chimney might be made with very considerable advantage. The form of chimney to which preference had been given is a gradual projecting curve, round which the smoke is driven by the rarefaction of the heat, which fills up the space which otherwise would be occupied by a fluttering current of intrusive air. An immense number of the particles of heat, which are entirely lost when conducted into the open aperture of the chimney, are here retained by the brick or fire-stone with which it is desirable to contract the chimney, and are radiated again upon the fuel, adding to the perfectness of the combustion (which is the generation of heat) to its greatest extent, and which should of course precede any attempt to economise the quality itself. This process acts and re-acts upon itself, and with accumulation of benefit; for in proportion to the perfectness of the combustion is the smallness of amount of smoke, and in proportion to the dimunition of the column of smoke may the aperture for its escape be diminished, and the proportion of heat from any given quantity of fuel be increased. More importance, however, attaches to the second branch of the subject, viz., the management of the fire for the production of heat, free from the prepossessions so prevalent and so expensive by which it is generally trammelled. The burning fuel must be placed in such a position as to produce the most perfect combustion; and this is to be accomplished by surrounding it wjth a substance retentive of heat, and capable of radiating it back upon the fire itself. This has been accomplished by partially covering the fire with a roof of fire-brick, by keeping the fire itself warm, and by allowing only a small aperture for the escape of heat which has been thus forced off at the highest degree attainable, then to be economised in its progress by close confinement and regulation. The great principle of economy here is that of taking the heated elastic fluid through a sufficient extent of absorbing material to extract the heat thus completely generated, and to apply it to purposes of uses; and to prevent the escape of so subtle a prisoner by that regulation which is applicable to the case. This may be effected by counteracting its tendency to ascend, which is of course proportioned to the temperature, by forcing it into a horizontal or even descending line by which it is retained, and from which the valuable property it contains can be extracted in a sufficiently lengthened process as the chyle of the human stomach is slowly imbibed for the nutriment of the individual. Mr. Hall proceeded to illustrate his paper by a number of diagrams drawn in chalk; and described a plan of adapting the same principles to cottage fire-places, as well as to extensive ranges for cooking.

Mr. Babbage, before proposing the thanks of the Section to Mr. Hall, mentioned the following circumstance as illustrative of how small a matter might produce great effects in the application of heat. He had placed a thermometer about two feet from a furnace in hot water, when it stood at 260°. The smoke in the chimney of the furnace then stood at 180°. He then by turning one damper introduced a current of air, and, in five minutes, the water rose to 290° and the smoke fell to 160°. The thanks of the Section were then given to Mr. Hall.

[Of Mr. Russell's admirable paper 'On the Resistance of Fluids,' we gave a sketch in our last.]

The business of this Section was concluded with a paper 'On the Principle of Oblique Bridges,' by Peter Nicholson, to whom the thanks of the Section were voted unanimously.

By way of addendum to this day's work, we have to refer to Mr. Stephens's Statistical Statement respecting Crime in Newcastle (which, together with Col. Sykes's, on the Vitality of Cadiz), we could only name in our last *Gazette*. It appears from this, that the number of prisoners which had come under the cognisance of the police from the 2d of October, 1837, to the 2d of August, 1838. The following is an analysis:—

Tried by jury and convicted	81
Acquitted	20
Summarily convicted by the Magistrates	1173
Discharged by the Magistrates	895
Total	2169
To these add persons summoned under the By-Laws, Town Improvement Act, Beer Act, &c.:—	
Convicted	284
Discharged	98
Total	2551

Of the 2169, 261 were strangers in Newcastle; 23 were transported; one died; 175 had gone from under the observation of the police by means unknown; and 78 had betaken themselves to honest and creditable courses.

Very few of the total number were tolerable scholars, and a great proportion of them could neither read nor write. The Return included many persons who had been more than once in custody, so that a corresponding deduction should be made from the number. Not a few of the cases in which the same person occurred two or more times, would be those of drunkenness and assault — a large class, as will appear from the following extract: —

Assault	270
Drunk and disturbing the public	351
Lying insensibly drunk in the streets	131
Total	752

Being more than one-third of the whole number of 2169.

In reply to a member of the association, Mr. Stephens stated that the population of Newcastle is about 60,000 (our report).

Mr. Heywood said that the return was most interesting, and came with great authority from the superintendent, who was a close observer of such matters.

Mr. Porter remarked, that the statement embraced a period of only ten months; and the number of cases in a year would, therefore, be about 3000. So large a number, in a population of 60,000 souls, did not convey a favourable idea of the state of morals in the good town of Newcastle.

Mr. Rawson said, that the county of Northumberland, as a whole, occupied a high position in the scale of morals, so far as the statistics of crime were a criterion. There were only two counties in England—Durham and Westmoreland—which stood above it. The rural districts of the county must therefore be singularly moral, as the town of Newcastle furnished so large a number of the offenders on which the calculation was founded.

Mr. Stephens, in reply to Mr. Porter, said that the offences of the better educated prisoners were of a lighter character than those of the more ignorant.

Mr. Rawson observed, that the return gave a result of one in every 30 of the population convicted of an offence against the law.

Mr. Porter.—But a large number of those included in the return were guilty of very venial offences.

Mr. Rawson, in reply to a member, said that in Northumberland, in 1837, one in every 1179 of the population was committed to prison; in Durham, one in 1257; and in Westmoreland, one in 2201. The proportion in all England was one in 565. It was a singular fact, that the six principal mining counties in the country occupied the most favourable position in the statistics of crime.

A conversation ensued, in which the advantages from sufficient wages, education, and religious instruction, were pointed out by various speakers.

Mr. Stephens stated, that, so far as his experience went, criminal offences were generally traceable to intemperance. Mr. Porter adduced a return furnished by the chaplain of Preston goal, in confirmation of this statement; but Dr. Bowring was inclined to think that the connexion of intemperance and crime was, in general, greatly exaggerated. Intemperance, in his opinion, was, and had for some time been diminishing; and the morality of the people was greatly improved. Col. Sykes (the president of the Section) observed, that the increased consumption of ardent spirits militated against Dr. Bowring's opinion: the consumption had increased in a greater ratio than the population. Dr. Bowring replied, that, to a certain extent at least, the increased consumption was only apparent. There was less smuggling now than formerly, and consequently there was a corresponding increased entry of spirits in the official tables. Besides, an increased consumption of spirits was quite compatible with less frequent intoxication in the people. The consumption of animal food in England had greatly increased, but this was no proof of an increase of gluttony: it was the result of that reasonable and moderate enjoyment of flesh meat, in which the people of this country now indulged more than at former periods. So with ardent spirits. In France, the inhabitants consumed much more intoxicating liquor than Englishmen; yet drunkenness was much less common in that country.

TUESDAY.

Section A.—*Mathematics and Physics.*

The room was nearly filled with ladies, on which Sir J. Herschel gallantly complimented the Section; and we are too well disposed towards the sex to enter into opposition on the subject. We shall only remark that ladies are admissible to the Sections of *Mathematics*, *Chemistry*, *Geology*, and *Mechanics*, and that they avail themselves so largely of the privilege, as (at meetings so numerous as those of the British Association now are) pretty nearly to exclude the male population, except in the shape of attendants upon them. Thus it happens that, generally speaking, little has been heard by the audience beyond the few who have a right to be near the chair;—the few indeed who have least to learn, and most to communicate. This is certainly an evil, but we do not see how it can be remedied. If nobody else receive a benefit from it, assuredly the good-looking dames and damsels of the Society of Friends, who muster in great force hereabouts, and display laudable anxiety for information, will be much improved in their mathematical, chemical, geological, and mechanical knowledge. And we saw ladies also occasionally in the Botanical and Zoological Section: and multitudes in the Statistical, though not permitted, we believe, by the programme. The Medical alone was uncheered by their presence; and Eugene Aram's skull, or pseudo skull, grinned for them there in vain. Yea, with all the interest they take in the condition of the Negroes, they were not in the room to hear

Dr. Sargent put down by Dr. Reed, when he asked, If being sun-burnt was not Nature attempting to give Europeans the same protection as the negro? and was taught that the black skin of the negro was quite a different thing from the tanning of an European: as different, in fact, as the surface of a Newcastle Pitman, or swarth yet elegant Palinurus of the Keel-row formation and dye.

Professor Whewell read a paper on the measurement of a level line between the Bristol Channel and the English Channel, executed by Mr. W. Bunt, of Bristol, under the direction of a committee of the Association; and a continuation of those valuable operations of which the reports of the last two years contain the principles and objects. We may repeat, that the extremities of the line selected are the neighbourhood of Bristol, on the north coast of Somerset, and Potishead, on the north coast of Devon; and the object to ascertain the level of the sea at these two places, taken in connexion with each other, and thence to determine whether any, and what, changes may take place in a course of years, either in the earth's surface, or in the state of the tides. The levels had been carefully taken, and many observations and calculations, made with respect to the tides, at all periods of their elevation and depression; and the result which Professor Whewell had come to was, that the mean tide should be taken as the level of the sea. This fact, he said, was not only curious in itself, but was pregnant with important practical consequences; for many errors crept in from calculating the level of the sea at high-water; whereas if they adopted the mean tide as the level, a fortnight's observation, and taking the levels for a few miles inland, would enable them to take the true levels of places a hundred miles off, for the construction of canals or other public works, without proceeding the whole distance. The paper concluded by stating that it was desirable to have a similar line measured from Bristol to London; but as the undertaking would be expensive, he should not press it on the society, though, of course, the greater number of instances in which his conclusion as to mean tides was tested and found correct, the greater confidence must be reposed in its practical utility.

Professor Lloyd said, it appeared to him that the mean tide at two particular places might give the level truly; but it was difficult to state whether that level, and the mean level of some other place, would form a level line. In Ireland it had been found that low-water was the best time of tide to constitute the sea-level. He was disposed to doubt whether any such thing as a level line could be represented by any phenomena of the tides.

Professor Whewell replied, if his operations proved any thing, and were not absolutely fallacious, they proved that the levels at mean tide were, in this instance, within a few inches of being strictly accurate.

Professor Lloyd made no question of the beautiful accuracy of these levels, but he doubted whether the levels would be found the same at other places.

Professor Robinson remarked, that in the surveys which had been made on the coast of Ireland, it had been found that at low-water the levels were found correct, but not at any other state of the tide. He should recommend a series of experiments to prove which was the most correct.

Professor Whewell said, undoubtedly it was advisable to gain more information; but the expense of conducting the operations rendered it unpleasant for one individual to recommend the Society to go much further, more particularly when nearly 500*l.* had been already expended.

Sir J. Herschel thought it doubtful whether it was possible to deduce a strictly level-water line in nature; but that in this experiment the question had had a very fair trial; for where, as in this case, there was room enough at each extremity of the line for the water to spread itself, a tolerably accurate level might be obtained.

Professor Bache next read a paper 'On the Effect of deflected Currents of Air on the Quantity of Rain collected by a Rain-gauge.' His experiments had been made during a period of between two and three years, on a high tower at Philadelphia, at the four corners of which he placed gauges of the ordinary construction. The prevailing wind in that part of the United States, and that which brought most rain, was the N.E., and yet he found that when the quantity of rain which fell into the funnel at the N.E. was as 1, that which fell into the opposite side, into the gauge placed at the S.W. angle, was as 2·800; thus proving that the gauges to windward received much less than those to leeward. He then tried experiments

with a gauge elevated on a high pole, by which he got rid of nearly all the disturbing action; but, having to leave America about that time, the progress of his experiments had been interrupted. He did not bring forward the details which he had laid before the meeting with any thing like a view to explain the subject, but to prevent any person going over again the ground which he had trodden.

Professor Robinson remarked, that having placed a rain-gauge at the top of his observatory, in Ireland, he had been much surprised to find that, during a heavy gale, the rain wandered round about the top of the funnel, but not a drop went into it. The funnel, he thought, should receive the rain in a direction much more nearly approaching the vertical. If they observed a tree or a cabbage during a shower, they would perceive the side on which the rain beat; and he would suggest that a sphere of a similar form might be contrived, which, by capillary attraction, would retain the drops and deposit them in a tube underneath.

Professor Stevelly said, if the rain were to fall perpendicularly, it would get into the gauge; but if a current of air caused it to diverge from the perpendicular, a quantity of drops would not reach the interior of the funnel in proportion to the extent of that divergence. If they observed any of the high chimneys in this neighbourhood, they would perceive that on the windward side the smoke was carried in a curved direction over the chimney, and was attracted to the leeward side: and so it would happen with the tower at Philadelphia, where the ascending column of air, having parted with its own drops, would carry the descending rain over the windward side of the tower, and deposit it on the leeward side.

Col. Reid said, he had observed, in the West Indies, that, during a storm, when a house at the edge of a cliff had escaped uninjured, another, at a little distance further from the cliff, had been unroofed.

Professor Lloyd could corroborate this view of the case, on the authority of a friend, who told him that on one occasion, when standing near the edge of a cliff, he found himself enveloped with rain, while at his feet no rain fell. It struck him that he might as well try to keep himself out of the shower also, and he accordingly sat down on the edge of the cliff, when he found that the rain which had previously fallen vertically, formed an arch above his head.

The chairman expressed his opinion that the ordinary rain-gauge, as a scientific instrument, should at once be thrown overboard; for clearly it could lead to no accurate conclusions. The discrepancies in the accounts of the quantities of rain which had fallen at different places were extravagant. Whilst, for instance, it was stated that 27 inches had fallen within a given period in London, between 60 and 70 inches were reported to have fallen in Lancashire. But this was nothing to India, where it had been stated 20 feet had fallen in one year. He might here mention, as a singular fact, that, at the Table Mountain side of the Cape of Good Hope, where he (Sir John) was located when residing in the southern hemisphere, there was a cloud constantly in the air. At a certain period of the year, this cloud came down to the surface of the earth, but it did not rain. He found, however, on walking under the tall fir trees, that he was subjected to a copious shower; while, on coming from beneath them again, it was fair. On inquiring into the cause of this, he found that the cloud was condensed on the trees, and thus the umbrella-shaped tops of the firs acted a part quite the reverse of our umbrellas in this country, for they wetted the person beneath them, instead of keeping him dry.

Professor Daubeny, of America, read a long paper on the climate of that country, containing observations on the mean temperature of different parts of the United States. It was chiefly interesting in a meteorological point of view, in connexion with the temperature of parallel latitudes in the new and old worlds.

Sir J. Herschel spoke of the value of such meteorological observations, and mentioned his intention to recommend the Association to give a pecuniary grant to enable them to be brought into order, as the operation of doing so would require little more thought than ordinary clerkship. He begged, in conclusion, to remark, that those who studied meteorology should be careful to make night as well as day observations, for there were considerable differences, essential to be attended to, between the two.

Professor Powell, in continuation of his experiments and remarks on light, entered abstrusely into the subject; and Mr. Dent made a communication on the vibration of pendulums.

SECTION B.—*Chemistry.*

Mr. West read a paper 'On the Composition and Properties of a new kind of Salts,' which had, however, been, unknown to Mr. West, previously formed; though his experiments generally confirmed, and, in some instances, extended former observations. The pearly lustre of some of the crystals, especially those from the bromide, is so beautiful, that Mr. West suggested the probability of their employment superseding the cruel practice of stripping the scales from living fish, for the manufacture of artificial pearls.

Professor Thomson read a paper 'On the Nature of a Sugar extracted from certain Organic Matter in persons labouring under the disease of *Diabetes mallitus*.' The sugar first produced was yellow, but, by a refining process, became perfectly white. Its composition was exactly that of common sugar; viz. 12 carbon, 11 hydrogen, and 11 oxygen, with the exception of a minute quantity of water which it contained: this water he removed by adding three atoms of oxide of lead, leaving the diabetes exactly the same as common sugar. It was also stated that sugar was extracted from the blood of persons similarly diseased.

Professor Johnson read a paper 'On a new Compound of Sulphate of Lime and Water,' which had been deposited in the boiler of a steam-engine. The compound was in the form of a powder; and its composition was considered interesting, inasmuch as it contained a different quantity of water to any other composition of the kind. The compound of sulphates were better understood than any other, owing to their cheapness (sulphuric acid, for instance) and frequent use, and yet chemistry was not yet in possession of a tenth of the facts relating even to these. They were all aware that rock salt was procured in large quantities, and sulphate of lime was invariably found with it; hence Berzilius threw out the suggestion, that rock salt had been subjected to great heat after it had been deposited in the earth. He (Mr. Johnson) did not, however, think that this conclusion could be positively drawn from the facts before them, inasmuch as nature had means of forming substances, to a knowledge of which man had not, and, perhaps, never would, attain.

Mr. Mallet read a paper 'On the Action of Light upon Solution of Potash,' which, enclosed in bottles of various colours, and exposed to the light, took the colours, red, orange, &c., of the bottles in which it was exposed, in the space of from 120 to 200 hours of exposure, and, when again exposed to light in a clear glass bottle, lost its borrowed tints, and appeared again perfectly colourless.

Mr. Pattison then read a paper 'On the Means of extracting Silver from Lead,' which stated that all the lead raised in England contained silver in quantities varying from one to one hundred ounces in the ton. The chief proportion, however, was from six to twelve ounces. When lead is heated red hot, it becomes transmuted into an oxide, whilst the silver retains its metallic quality. The oxide can be easily changed again into lead, but not without a considerable loss from its extreme volatility, losing from a twelfth to a sixteenth of the lead refined. He made various experiments in order to avoid this waste; and in one of them he ascertained that lead was capable of being distilled for the purpose of coming at the residue of silver, but the heat required to effect this process was so great, and must be so long continued, that the discovery could not be turned to profitable account. In another experiment he stirred about the liquid lead until it cooled, forming a powder, at the bottom of which he discovered some crystals formed; and, on analysing these crystals, he found that they contained a lesser quantity of silver, leaving a greater quantity in the powder. Following up this hint, he formed large vessels; and by repeating the powdering process frequently, and removing the crystals, he brought the powder to contain silver to the amount of 200 to 300 ounces per ton, whilst the crystals did not remain more than 10 to 15 dwts. per ton. This means was now in universal operation in the lead works of England, and with the most profitable results. The expense of refining amounted to no more than three ounces in the ton, and the nett quantity of silver gained by this process was about 54,000 ounces per annum, besides about 300 tons of lead saved in the same period, by avoiding the process of oxidation. He was of opinion that the crystallisation took place by the homogeneous body of lead being drawn together by its own attraction, to the exclusion of the foreign body; silver, in the same manner as salt water becomes fresh in the process of freezing, the saline particles separating from it and dispersing in the aqueous fluid, whilst the fresh water all comes together in the form of ice. There was a difference between the solubility of lead and that of silver, but not sufficient to enable the metals to be separated by the fluidity of the one and the solidity of the other.

Dr. Bird read a paper 'On the Action of Nitric Acid on Alcohol.' A small quantity of the former mixed with the latter and exposed to a temperature of 112° Fahrenheit, turned to a scarlet colour; at 114°, to a brown; and, at 120°, to a dark-brown colour, emitting an offensive smell like that of soap lees. The same gentleman gave the results of a curious experiment by dividing a retort into two cells by a partition of plaster of Paris; one cell he filled with distilled water, and the other with sulphate of copper. By a copper wire he connected a piece of zinc (which he dropped into the cell filled with water), and copper pyrites, which he dropped into the sulphate of copper. After exposing to a moderate heat, he found particles of copper adhering to the plaster of Paris, and quantities of minuter particles running every where through that substance precisely in the

form of the veins that were found in natural mines.

A paper, by Mr. Richard Phillips, was also read, and the section adjourned.

SECTION C.—*Geology.*

Mr. Lyell in the chair.—The continuation of Mr. Buddle's paper 'On the Coal Measures, &c. of Newcastle,' was read by Major Portlock; but we are forced to defer this paper till our next, when we will insert it at length.

Professor Buckland then took the chair in order to allow Mr. Lyell to read a paper 'On some Vertical Lines of Flint terminating in a horizontal Stratum of Chalk, at a Quay at Grove's-End House, near Norwich.' Mr. Lyell said that he had lately visited this quarry, and he saw a great quantity of flints, or "pot-stones," as the common people called them, standing up in the chalk, one as it were upon the end of the other. These pot-stones all had in the centre a cylindrical nucleus of chalk, which the workmen, who were very intelligent men, assured him was a superior chalk, and did not crumble in frost like the common chalk. He also found organic remains scattered about among the pot-stones, in the same way as he found them amongst the chalk. He mentioned this in order that some investigation might be made. At all events it was a partial phenomenon, for he had searched in a quarry in the neighbourhood, and found very few of these pot-stones, and in another, not far distant, where he could not find any. He had no theory to offer on the subject; but he wished to ascertain whether they had been deposited there as nodules or continuous layers, and whether they were organic.

Mr. Smith remarked that he had seen similar phenomena on the coast of Cromer, about thirty years ago.

Professor Sedgwick said he had not been at the locality of Grove's-End House quarry, but he believed that there was scarcely a chalk pit about Norwich which was without them. He was of opinion that they were concretions formed upon chalk, or some spongia which had grown under the sea, and finally came to the land for their inspection. There were many flints had hollows in them, and in that hollow was a mixture of silicious matter which was harder than the common chalk. Organic bodies, which became consolidated like these pot-stones, are not filled with chalk, but with a mixture of silicious and calcareous matter. If they were organic, there was nothing so like them as the hard spongy substances growing in tropical seas. Almost all the vertical flints which he had examined had, more or less, hollows in them, and were formed by a series of processes. The old carcass became the root which protruded its successor.

Professor Buckland said he had seen some of these dubious creations in a quarry in Belfast. He thought they were not of vegetable origin. He had been inclined to think they were organic, but his theory now was, that, for a time, a larger proportion of chalk was once soluble, and the flints or pot-stones might have have had their origin in precipitation.

Mr. Griffiths said these flints occurred very frequently in quarries in Ireland, and they all contained a white chalk much more compact than the chalk by which they were surrounded. In a quarry near Belfast they were always found in pairs, and the external and internal surfaces were quite smooth, but very irregular in form. He had come to no conclusion respecting their origin.

The chairman said, whenever the explanation arrived, he believed that the phenomena in question would be found to be from some remains of a zoophitical character.

The next paper was by Mr. T. W. Webbe, 'On Lunar Volcanoes,' which was read by Mr. Torrie. It seemed to us to be quite out of place in this section; but, in truth, the lines of division are often hardly perceptible in this respect; and as often violated where they are perceptible. Papers belonging to one section are read in another, and sometimes repeated in a little different form. So we had this Astronomy in Geology, as we had Phrenology in the Medical Section, and other variations elsewhere. The paper was, however, read, and set forth that, from recent observations, it was evident that new craters were forming in the moon, where there still were eruptions of explosive matter. From several observations taken with excellent instruments, craters were now to be seen which did not appear in the plates of Schruter and other old observers. And Mr. Webbe contended thence, that the moon was undergoing great and perpetual change.

Captain Sir George Back, who had on the preceeding day been elected chairman of the Geographical division of this section, then took the chair, and said, that although he had, for a great portion of his life, been endeavouring to promote the interests of the inhabitants of the frozen regions, he begged to introduce an inhabitant of another clime, a Mandingo, from one of the least known islands on the banks of the river Gambia. This black gentleman, who was a fellow-passenger from London with us, was accordingly presented, and made his salaam. Captain Washington proceeded to give an account of his life, from which it appeared that he was called Mohammed Sissy, and that he was a native of Negarri Maree, a village on one of the least known islands on the banks of the Gambia river. He was now nearly fifty years of age, and, at seventeen, he said that he perfectly remembered the visit of Mungo Park to his native village, on which occasion he assisted in carrying his luggage; he remembered the visit also from the circumstance of a quantity of rum being given away in order to facilitate the supply of horses for the transportation of Mr. Park's baggage. After that time he had made various journeys into the interior of Africa, had acquired considerable knowledge of the language, and could read the Koran well; certain extracts from which, in his own writing, he always carried about with him. From the knowledge he thus obtained, he had enabled Captain Washington to insert the names of sundry places upon the map of Africa. On his return from these wanderings, Mohammed married his cousin, and, as a proof of his superior intelligence, kept a school. A war broke out between two rival kings, in the course of which he was taken prisoner, and sold to slavery. Five days after the vessel sailed, in which himself and his companions were chained, they were attacked and captured by a British frigate, and the cargo landed in the West Indies, where Mohammed entered into the English service as a grenadier, where he soon became the right-hand man of his company. In 1825 his regiment was paid off, and, after sundry vicissitudes, he had come to England to seek a pension for his fourteen years' service in the British ranks, with which he wished to return to his native village, to impart to his countrymen the fruits of a residence of a quarter of a century in the midst of civilisation. Captain Washington said Mohammed had now resided some time here with him, and he found him remarkably intelligent and pious (after the manner of his faith). He had assisted Captain W. in forming a vocabulary of 2000 words in the Mandingo language, a vocabulary which would enable any one to translate the New Testament, and could not fail to be of the utmost use to future enterprising travellers in acquiring a knowledge of the interior of Africa.

The chairman said such a vocabulary might be the means of some future traveller going to Timbuctoo, and Captain Washington was entitled to the thanks of every geographer.

Captain Washington next read a paper by Professor K. E. Von Baer, of St. Petersburg, on a Russian expedition to Nova Zembla. The paper, after giving an account of various expeditions, stated that the Russian government had ordered five exploratory expeditions, the first four of which were fruitless, but the result of the fifth was so far satisfactory, that they were enabled to explore the whole of the west, and part of the east coast; and the fact was, that the island was reduced from an extent of twelve thousand square miles to about one-third of that amount. The land on the west side was mountainous; the mountains being 3,500 and 3,800 feet above the level of the sea; these mountains were chiefly composed of black slate. On the east side the shore was low and barren. There were one hundred miles of the north-east shore not yet explored. Many as the voyages of discovery had been, Captain Washington said, the Academy of Science at St. Petersburg had done more than any body of men in the promotion of that branch of science, and they had the modesty to state, that they would never have done so, had they not been stimulated by the adventurous exertions of Parry, Franklin, Ross, Back, and Richardson.

Captain Washington also read a note from Lieutenant-Colonel Velasquez de Leon, giving an account of a new map of Mexico, which had been recently constructed by order of the government.

SECTION D.—*Zoology and Botany.*

With regard to this Section, we have to observe, with regret, that it seems to languish amid the bolder exertions of several of its contemporaries, and to direct its attention to very many very minute matters, which we think might be expounded in three minutes, whilst they occupy hours.

Sir W. Jardine in the chair.—Dr. Richardson presented from the author a beautiful work,—*Monographia Anoplurorum Britanniæ*, by Mr. Henry Denny.

Mr. Hindmarsh then read a long and very interesting account on the character, habits, and origin of the wild cattle in Lord Tankerville's park, at Chillingham, which was entertaining and interesting, but conveyed no very new information as to their origin or breed. They retained, he stated, pre-eminently all the characteristic of wild animals, some of which were very curious. They hide their young; feed at night, basking or sleeping through the day; they are fierce when pressed, but generally very timid, moving off on the first appearance of any one, even at a great distance. They, however, vary much in different seasons of the year, and according to the manner in which they are approached. In summer, for instance, for several weeks they are scarcely to be seen; and on the slightest appearance of any human being they retire into the wood, which serves as a sanctuary for them. On the other hand, in winter they would go down for food into the inner park

and, being in constant contact with the people, they would let them almost come among them, particularly if on horseback. Their usual mode of retreat is, to get up slowly, set off in a walk, then in a trot, and afterwards in a gallop. In form they are gracefully shaped; short legs, straight back, thin skin, and horns of a very fine texture; some of the bulls appear of a cream colour, and they have a peculiar cry, more like that of a wild beast than of ordinary cattle. They, also, have all the marks of high breeding, and some of its defects. They are bad breeders, and are subject to the rush, a complaint common to animals bred in and in. When they come down to the inner park, which they do at stated hours, they move like a regiment of cavalry, in single file, the bulls leading the van; and, as they retreat, the bulls also bringing up the rear. Mr. Hindmarsh then continued, by stating that there were at present in the herd at Chillingham Park about 80 cattle, viz 25 bulls, 40 cows, and 15 steers, of various ages. The eyes, the eye-lashes, and the tips of the horns are black. The bulls have no mane, but a little coarse hair; and they fight for supremacy, until a few of the most powerful subdue the others. The calves suck their mother nine months, and, when first born, are hidden in some sequestered spot for a week or ten days, to which the mothers go twice or thrice a-day to give them milk. Should any one approach the calves, they clap their heads to the ground, and lie in the form of a hare. They seldom live more than 8 or 9 years.

Mr. Selby had great pleasure in speaking to the correctness of the paper then read, and of the habits and manners of the cattle described. The subject, he considered, was of very great interest, and he had little doubt but that the cattle were the ancient breed of the country.

Professor Morren, of Liege, communicated his paper on the culture of Vanilla in Europe, in the production of which he has greatly succeeded, so as to promise a very valuable addition to commerce. The plant he had raised was the *Vanilla planifolia;* and from two specimens, particularly, he had obtained many hundred fruits, as large and aromatic as the best of Asia. He explained the mode of cultivation, by which he thought it might be grown in England;—letting it grow for five or six years, and allowing it heat and moisture. The remarks on the mode of propagation were extremely odd, and by no means fit for propagation in a popular journal, whatever they may be for men of science. Even here, it was as well that it was in a foreign tongue.

Mr. Turner, of Manchester, exhibited some fine specimens of Lammelicorn Insects (Beetles) from the gold coast of Africa. A few observations, 'On some new and rare British Fishes,' were next read by Dr. Parnell, of Edinburgh, with exhibition of many very fine specimens.

After the paper was read, a discussion ensued on the peculiar species of two of the fishes.

We have to express our admiration of the natural and perfect manner in which the specimens are preserved; they look almost as much alive on their papers, as when taken from the water. With regard to the discussion upon gurnets, rays, &c., &c., we have to remark, that the *only* novelty which appeared worthy of specific attention, was the *Gadus cymbrius* of Linnæus; the *Motilla cymbria*, or four-bearded rockling (for some fish have four beards, if others have four eyes)! from the Firth of Forth. This fish, we believe, Mr. Yarrell has also obtained at Bute, in Rothsay.

The next paper was 'On the *Falco Islandicus* of Authors,' by Mr. John Hancock, of Newcastle, and contained remarks on the Greenland and Icelandic falcons, shewing that they are distinct species, and for the following reasons:—"My attention was drawn to the subject in 1833, by two specimens brought from Iceland, as the young of the Greenland or white species; one of which is now in my possession, and I am satisfied is a mature female of the true Iceland bird. The reason I had for thinking this was, that the cordated markings on the breast, and the transverse bars on the flanks, were sufficient to prove the fact; and it was impossible to suppose that a bird so symmetrically and characteristically marked should be a mere variety of the Greenland or white falcon. I afterwards possessed a bird from Davis's Straits, which is undoubtedly the young of the white species, there being a quill feather of the mature dress." The author then went at a considerable length into reference as to various facts and specimens, exhibiting the peculiar features of the bird, describing its particular plumage, &c.

Mr. Strickland observed, that he had, from long attention to the species of birds, been extremely cautious in coming to an opinion merely from their colour or plumage; but he must allow that, with respect to the plumage of the specimen of Mr. Hancock, if ever there was a case that might be considered safe and definite, it was a very strong one. It was a singular and interesting fact, that the account given that day of the particular species, coincided with all the old writers on falconry. He knew that very few specimens of this bird could be obtained, from the close monopoly of the King of Denmark; and, in consequence, few instances for examining the species of falcon had occurred. He believed that this specimen would clear up a point with all ornithologists, which had been considered a great desideratum.

A few observations were then made by Mr. Selby and Mr. Fox, the latter gentleman noticing the exertions of the Durham University in collecting the Iceland birds, in sending out Mr. Proctor, who had brought home about 150 specimens of the rarer kinds, which would form an able Icelandic ornithology. The liberality, also, of the managers of the university in making such an effort, deserved the notice of the Association.

A paper, by Col. Sykes, was read, 'On the *Canis jubatus* of Azara, and *Felis perdalis* of Temmina,' with exhibitions of a skin. The paper was followed by one from the Rev. Mr. Hench, on certain vegetable monstrosities. There were several remarkable specimens, and the subject of the paper was divided into the following divisions:—1st. Causes of coherence and adherence. 2d. Anomalies depending on the comparative developement of parts of our circle. 3d. Anomalous transformation of organs. 4th. Monstrous exuberance of growth; and 5th. Anomalous suppression of parts, and examples produced.

Section E.—*Medical.*

The mayor, Dr. Headlam, in the chair; some little delay having occurred in assembling.

The papers and discussions related to uterine hemorrhage and cholera, in reference to which last, tables from Rome, during its prevalence there, were exhibited by Dr. R. D. Thomson: one containing a number of cases that occurred daily during the prevalence of the disease; the other, a mathematical curve and calculation. The curves, &c. were very like Mr. Whewell's on the tides; and Dr. Granville ridiculed the notion of submitting diseases to such fanciful mathematical figures.

The next paper was by J. Blake, Esq. 'On the Action of various Substances on the Animal Economy when introduced into Veins,' in which the writer detailed the results of several experiments he had made.

The last paper was 'On Abscess of Lung,' by Dr. Barnes. To the former Mr. Blake applied a new instrument, designated an hæmadynameter; and some interesting observations were made on the effects of various substances, potash, soda, arsenic, &c., when introduced into the system through the blood.

Section F.—*Statistics.*

Mr. Heywood read a series of statistical illustrations of the principal universities of Great Britain and Ireland, by the Rev. H. Longueville Jones, in which an attempt was made to arrive at an approximation to the revenues of these institutions, and to calculate their "stimulating forces" on men in a pecuniary point of view. This stimulating force was thus announced in a tabular form:—

	Heads of Houses.	Annual Revenues.	Fellows.	Annual Revenues.	Scholars.	Annual Rev.
Oxford	24	£18,350	557	£116,560	395	£6,030
Cambridge	17	12,650	431	90,330	793	13,350
Dublin	1	2,000	25	25,400	—	—

	Benefices.	Incumbents.	Revenues.	Rents of Rooms.
Oxford	455	430	£136,500	£11,730
Cambridge	311	280	93,300	15,860
Dublin	31	31	9,300	2,000

These and other details led to a long discussion, in which Mr. Heywood, Dr. Taylor, and other gentlemen took part. Mr. H. (who was educated at Cambridge) said that whatever "stimulating force" the revenues of the universities might possess, the moral force of these establishments on the country was infinitely greater. From them proceeded our senators, judges, magistrates, &c. &c., and it was impossible to calculate the influence which they exerted on society. As normal schools, in which teachers were reared for the provinces, he regarded them as very valuable. In the course of the conversation, Dr. Taylor observed, that, as every thing in Ireland must have a blunder, they had three examinations in the year in Dublin University, and called them quarterly; that they had no professor of Irish, which was another blunder; and that when a sum of money was bequeathed to establish a professorship, the family of the testator went to law, more than double the amount of the legacy passed into the pockets of the lawyers, and that was another Irish blunder.

The debate led to no results beyond such pleasant observations; for the numbers and classes of students, of lecturers and professors, &c. &c. &c. seemed to determine nothing useful in regard to education.

On this important subject the next paper bore far more directly. It was by Mr. Cargill, 'On the Educational, Criminal, and other Statistics of this busy Town.' There were about 16,000 children between five and fifteen years of age, of whom 7761 were destitute of instruction. Of day-schools there were 126; of teachers, 178; of Sunday-schools, 38 (10 Established Church and 28 Dissenters), attended by 5058 children; and in some, reading only—in others, reading, writing, and arithmetic—were taught. The condition of many of the schools was deplorably bad.

The criminal returns gave 11 males and 11 females under the age of 12 years.

From 12 to 14	19	males	6	females.
— 14 to 17	65	—	26	—
— 17 to 21	185	—	107	—
— 21 to 30	272	—	215	—
Above 30	205	—	142	—
	757	—	507	—

Of these, 243 males and 204 females could

neither read nor write; 108 males and 125 females could read only; 377 males and 177 females could read and write imperfectly; and *only* 29 males and one female, who were tolerably educated, were found in this abject and vicious condition.

Of the dwelling places of the lower orders in Newcastle, the picture was not favourable; for there seemed to be great want of comfort and much distress. No cellars, however, were inhabited, as in Liverpool and Manchester; and it was stated that Sandgate, though poorer than Newcastle, was the abode of a more contented and intelligent population. The wages of labour were good, but, as is too often the case in such circumstances, the workmen were improvident. To us it appeared that the people generally lived well, and were able to supply themselves with sufficient and nourishing food.

A very long discussion ensued on this communication, in which Mr. Simpson, of Edinburgh; Mr. R. Owen, Mr. Rhind, Mr. Rawson, and others, participated; and Mr. Cargill closed the conversation by urging the importance of establishing good schools in the collieries—a project for the accomplishment of which the Educational Society had mainly been originated, but in which they had many obstacles to encounter.

Mr. L. Hindmarsh, of Alnwick, read a paper 'On the State of Agriculture in the Northern Division of Northumberland, and the Condition of its Agricultural Labourers, amounting to a Population of above 85,000 Souls.' Mr. H. warmly eulogised the intellect and morals of its peasantry, the comforts of its farmers, and the virtues of the Duke of Northumberland as a landlord, and the Duchess as a promoter of education. The notion that the "bondage system"* of the district was analogous to negro slavery, Mr. H. stated to be absurd, the contract between the employer and the employed being perfectly voluntary, and the latter enjoying entire liberty of action on the expiration of his engagement. The intellectual energy of the inhabitants, he was inclined to think, might have its origin in the vigour and watchfulness which were called into existence and cherished by the wars of the Border; and their independence he attributed, in a great degree, to the principle of the Poor Law Amendment Act, which was carried out in Northumberland long before that measure was placed on the statute book. Seldom, or never, were the able-bodied assisted by the poor's rate; and the peasantry, trained to habits of self-reliance, were placed in a situation of independence and comfort. The state of education in Alnwick was adduced as a fair specimen of the whole of this agricultural district: above 960 received instruction of various kinds in a population of 7558.

Mr. Carr, of Wooler, gave great credit to Mr. Hindmarsh for his excellent paper, but differed from him in some respects.

SECTION G.—*Mechanics.*

Sir J. Robinson explained a process of generating heat by burning gas through a tube open at the lower end, and the top end covered by a wire gauze similar to the Davy lamp. This process he had used in his own house for upwards of eleven years, and had found it completely successful; he introduced it as a substitute for coal. A short discussion followed, during the course of which Mr. Russell observed, that for cooking small joints the application of gas was most economical, but for cooking larger joints the direct application of coal fuel was found the cheapest.

Mr. Evans entered into a brief explanation of the principle of 'Rowley's Patent Rotatory Engine,' which he illustrated by a series of diagrams.

Mr. Stephenson, having been called upon by the chairman to give his opinion on the subject, observed that there was great danger that in rapid motion the eccentric, by which the rotatory motion of the cylinder was produced, would fly to pieces.

Mr. Russell observed that there was nothing new in the construction of the engine. He condemned the principle of rotatory engines as bad; and observed that, though upwards of 100 patents had been taken out for rotatory engines, not one perfect machine was in operation in the country.

Mr. Stephenson considered the rotatory engines exceedingly defective. They could not be stopped at half or quarter stroke like the reciprocal engines. Besides, no advantage could ever result from the use of rotatory engines which could not be obtained in greater perfection by reciprocal ones.

Mr. Hawkins saw no good whatever that could arise from rotatory engines, as they were radically bad in principle. He had studied the subject upwards of thirty years, and he was perfectly convinced of their impracticability.

Mr. Herapath and others defended them; and the president, in closing the discussion, observed that, even if rotatory engines were correct in theory, and perfect in execution, the rapid wear would render them unavailable in a mercantile point of view.

The sectional labours for Tuesday were terminated with a paper by Dr. Lardner, which we are compelled to omit, for the present, on account of its great length; but the labours of the ordinary followed at five o'clock, where the Duke of Northumberland presided, and was most enthusiastically cheered by the company. Indeed, we may observe that his grace's munificence and affability on this occasion have won him golden opinions from all ranks, and that the manifestations of popular feeling, wherever he appeared, were as universal and warm as we ever witnessed. At the dinner he was supported by the Bishop of Durham, the Marquess of Northampton (one of the most zealous, constant, and efficient friends of the Association), the Earl of Tankerville, and other persons of high rank and distinction in science.

The first toast was "Her Majesty the Queen;" upon proposing which his grace expressed a wish that she might long reign over a happy, a united, and a prosperous people.

In introducing the toast of the evening, the noble chairman expressed the pleasure and satisfaction which the proceedings of the Association had afforded him; all had been conducted in harmony and peace, and he hoped that such would ever be the case. He begged to give "Prosperity to the British Association for the Advancement of Science," which was received with great applause.

The Marquess of Northampton proposed "The health of their noble president, the Duke of Northumberland," amid long continued cheering. It afforded him very great pleasure, he could assure the company, to find his grace in his present position. The noble marquess then proceeded to state the gratification he had derived from this meeting of the Association, which, in one department more especially, he was convinced would be the means of communicating a vast amount of valuable knowledge—he meant geology. He again proposed "The Duke of Northumberland;" and, when the plaudits ceased,

His Grace, who was again saluted with enthusiastic shouts, said he heartily thanked the company for the honour they had just conferred upon him, and for the great kindness he had received throughout this occasion. He assured the company, that it was his anxious wish to afford every support in his power to an Association which had in view so important an object as that of the dissemination and the advancement of scientific knowledge. And he would avail himself of this opportunity of congratulating this district, so important in a geological point of view, and also the Port of Tyne, which was second only in point of navigation and importance in the kingdom, upon having the meeting of such an Association held there, and upon the advantages which it must confer upon many of its most important interests. He hoped the advantages which must accrue from such an occasion would not be lost. It had brought amongst them some of the first men in the country in practical science, who were imparting information by means of the most interesting and important scientific questions of this age of rapid improvement; and he hoped that it would prove of advantage, not only to that district, but to the public at large. The noble duke resumed his seat amidst the most enthusiastic acclamations of the numerous company.

Other toasts followed, and were properly acknowledged; the company enjoying the treat in a lively manner. Among others, the noble chairman said, he trusted he should be allowed to take upon himself to propose as a toast, the health of one to whom they were all much indebted for the splendour and comfort with which they had been treated, in the accommodations made for the different departments of the Association; the town of Newcastle, too, was much indebted to him. As if by a magic wand, streets and public edifices had within a short space of time sprung up, in such elegance, and to such an extent, that really it was the opinion of many persons that it should no longer be called a town but a city. He begged to propose "The health of Mr. Grainger." Drank with great applause.

The Mayor rose and said, that he could not refrain from bearing testimony to the anxiety which Mr. Grainger had all along shewn to do every thing in his power to accommodate the Association.

Mr. Grainger, who was received with great applause, briefly acknowledged the compliments.

Some other toasts and sentiments were proposed, and the company broke up shortly before eight o'clock.

The evening's instructive entertainments consisted of lectures on and descriptions of models, which were brought from the model-room (so well conducted by Professor Johnston) to the Central Exchange; and explained to a crowded meeting by Professor Babbage, Dr. Robinson (Armagh), and Professor Willis. Intended for a popular purpose, these proceedings, in which wood printing and engraving, bridges, and locomotive engines figured, do not require to be reported.

THE MODEL-ROOM

itself more than answered the expectations formed of the addition of such a feature at the meetings of the Association. We must notice

* In these northern parts it has been attempted to get up an outcry against this word, giving a different signification to it from that which it really imports, and according to which it is practically used.

two or three of its most remarkable articles. First, among mechanical inventions, there is a "*Pendulous Printing Press*, by Thomas Edmonson, Milton Station. This instrument has been invented for the purpose of dating the tickets given to passengers on the Newcastle and Carlisle Railway with facility and despatch. Upwards of ten thousand tickets can be printed by it with one supply of ink. This is accomplished by means of a riband saturated with a peculiar inking composition, attached to two small rollers, and shifted by the pressure of the finger against the instrument. The impression, which is dry and permanent, is obtained by simply putting the ticket into a space left for it in the centre of the press."

We allude to this clever invention particularly, as we think it may be employed with great advantage in the new arrangements of the Post Office, receiving the letters and stamping them for their destination!

We have also "*Specimens illustrating the Process of manufacturing Needles by Patent Machinery*, invented by Mr. Samuel Cocker, Porter Works, Sheffield. No. 1. Soft steel wire, in lengths for two needles; 2. Ditto pointed on conical files, making 10,000 revolutions per minute; 3. Ditto grooved, with an indentation for the eye; 4. Ditto ditto, and eyed; 5. Ditto filed, headed, and eyed, by punching; 6. Ditto filed, headed, drilled, and countersunk; 7. Needles made according to the old mode; 8. Finished needles (sharps) made by patent machinery; 9. Ditto (betweens) ditto. The value of labour from the wire No. 1 to No. 7 (inclusive) would be 1*s.* 1*d.* per thousand. The expense by patent machinery from No. 1 to No. 5 or 6, inclusive, 1*d.* per thousand. 100 patent machines, which would occupy four rooms, each about twenty-five yards by ten, will, by the power of a six-horse steam-engine, be sufficient to produce 14,000,000 needles per week. The fash, made in grooving, is filed off by circular cutters, in the last operation of the machine, leaving the needle in the state of No. 5 or 6."

Models of bridges were very attractive.

"*Timber Bridge*, 200 feet span, which is the largest span in timber that has been attempted in this country. Each curved under bearer forms an abutment for each pair of struts which support the upper bearers; both the upper and under bearers are so connected together by the struts and suspending pieces, that the framing forms a solid rib, upon which the joists for supporting the roadway are sustained; and the whole weight of the bridge itself, and the weights passing along it, ultimately rest upon the abutments. This bridge is intended for turnpike-road traffic, but the principle may be applied to any other kind of traffic, such as railway traffic, with heavy locomotive engines passing at rapid rates. A bridge of two arches, each similar to the above, is now about to be erected over the Tweed at Norham.—J. Blackmore, Esq., engineer, Newcastle."

"*Model of a Timber Arch, on a new Construction*, by Messrs. Green, architects. In this arch the ribs are put together with Dantzic deals, in lengths of from 21 feet to 45 feet, 11 inches broad, and 3½ inches thick, fixed together with oak treenails. The experiments tried have sufficiently proved the strength of such arches, and the durability they possess over other wooden bridges arises from the simplicity of their construction. The model is on a scale of half an inch to the foot."

We conclude with the Grey Column, the statue upon which, executed with great simplicity and dignity by Mr. Baily, R.A., was placed upon the summit on Saturday. The column itself stands in rather a confined situation in the street; but the general effect is good, and it will appear to more advantage when the scaffolding and surrounding rubbishy materials are removed.

"*Model of the Grey Column*, by John and Benjamin Green, architects, now erecting at the north end of Grey Street, Newcastle. The total height to the top of the figure will be 133 feet, the diameter of the shaft is 9 feet 11 inches. The order is of the Roman Doric, and there is a staircase consisting of 164 steps to the top of the abacus of the capital, from which there is a fine panoramic view of the town and the surrounding country."

WEDNESDAY.

Wednesday is the grand business-day of the Association, in which the reports are made of the experiments, &c., for which sums have been granted at the preceding meeting; but we must here hold our hand in regard to the proceedings, as we have to add to the already great length of this report a note of the important proceedings of the general committee, which so vitally affects the future plans and existence of the institution. Therefore, instead of *Wednesday*, it must be

THURSDAY.

Central Committee, 3 o'Clock.

The minutes of the meeting on the 18th were read and confirmed; and, henceforward, this committee will consist of five classes there enumerated.

Dr. Granville gave notice that he would, at the next meeting of the committee, present a petition, numerously and most respectably signed, for the establishment of a Section for the promotion of Agricultural Science.

Also, of a motion on the best mode of communicating alterations, &c., made by the council: which Mr. Whewell intimated he would strenuously oppose.

Mr. Murchison then called the attention of the committee to the special purpose for which it was assembled—namely, to fix the next place at which the meeting of the Association should be held.

He referred to documents in his hands, and brought forward a repetition of the claims of Manchester to this honour, backed by the civil authorities, and all the literary and scientific institutions.

From Birmingham, by the high bailiff and the inhabitants generally.

From Glasgow, the magistrates, the university, and the inhabitants.

From York, the original birthplace of the Association.

From Hull, resolution of all the public bodies, &c., and

A renewal of the invitation from Sheffield.

Mr. Scholefield, junior, at the head of the deputation from Birmingham, addressed the president, and in very becoming terms urged its central situation, it easy access from London, the interesting and brilliant appeal made by Mr. Corrie in its favour last year, its perfect accommodations, and the earnest desire of its inhabitants to entertain the Association.

Mr. G. W. Wood spoke for Manchester; but left the period to the decision of the general committee.

For Glasgow, Mr. Baillie Ball, Mr. Smith of Jordanfield, Dr. Nicol, and Professor Thomson, warmly urged the claim for an early visit, and noticed the modesty of that city in not pressing its suit sooner, after the Association had been at Edinburgh.

Mr. Wellbeloved addressed the committee on behalf of York, and hoped the Society would not forget the place of its infancy, or despise the cradle in which it had been so carefully nursed.

Mr. Lucas renewed the Sheffield request; and

For Hull, Mr. Frost set forth its fitting accommodations, to have five of the sections in one building, and the two others very near. He also dwelt on the strong wish entertained by the inhabitants to do all in their power on such an occasion.

Mr. Babbage rose to propose that Birmingham should be selected for the ensuing meeting, and expatiated on the conveniences it afforded. He spoke in high praise of the exertions made in Newcastle to give a handsome reception to the Association; but hoped it would not tend to deter less wealthy places. If hospitalities were somewhat repressed, we might do more to advance science. He noticed that 3000*l.* were devoted to experiments, but a much larger sum to travelling and entertainments—perhaps to the amount of ten or twelve thousand pounds a-year. In his judgment, it would be better to render such large sums more productive towards the objects entertained by the Association.

The Marquess of Northampton seconded the motion, and alluded to the strong claims also from Glasgow. After being at three sea-ports, it was advisable now to visit a town in the heart of the country, where (as Mr. Phillips afterwards testified) there were rooms quite fit for the largest accommodations.

Mr. Smith (Jordanfield) upon this resigned for the present the claim of Glasgow; and it seemed to be pretty generally understood that it would stand foremost for 1840.

The motion for Birmingham was then put and carried, and Mr. Scholefield returned thanks.

The question of time was then raised, and Mr. Murchison suggested June or October as most convenient for the geologists. Mr. Sedgwick humorously seconded the proposition as a knight of the hammer, called upon to do so by the general secretary, and for fellow-craft's sake. He thought, however, it might be dangerous to meet in June, when the heat was so great that, what with the fusion and confusion, they might never separate again.

The Bishop of Durham alluded to the shortness of the days in October, as an objection to meeting so late in the season. The state of the moon should also be taken into consideration.

Dr. Granville objected to both dates, as, though very convenient to geologists, very inconvenient to all the other Sections. It would sacrifice every branch of science to that one. No members of the medical section could leave their professional duties in October, and many others would be precluded from attending the meeting.

Sir John Robinson noticed the meeting of the Highland Society, at Inverness, already appointed for the same time.

The Marquess of Northampton was for leaving the appointment of the time to the council.

Mr. Murchison said, the latter end of September might suit the geologists, since October was objected to.

Sir C. Lemon thought June might do. We had no reason to be afraid of the heats of our Junes.

Professor Thomson (Glasgow) said that

June or July would exclude all teachers, and the same in October. He was for the end of August or beginning of September, as most eligible for all.

Professor Graham followed on the same side: August and September were the only months in which the habitual members could attend. He, therefore, proposed August, leaving the week to be fixed by the council.

Colonel Sykes noticed that in June the Mechanical Section could not be attended, its principal members being engaged in business with Parliament.

Mr. R. Taylor also stated that the professors of foreign universities and schools must be back in their own countries in October.

Sir W. Hamilton was for August. On the nineteenth there would be a full moon.

The month of August was then put to the vote and carried.

Mr. Babbage again rose, and entered upon a question which excited a strong, and we must say, a dangerous feeling in the committee. He declared that, in his opinion, men of science were in this country a low grade of society, below their station in any other country, and insufficiently honoured by the aristocracy, or considered by the government. He took a depreciating view of the aristocracy, of whom he asserted, that a great majority looked with contempt on the pursuits of science. Those in authority knew little of science, and cared for it less. He pursued these strong remarks (which we should be sorry to report at length), with calling on the committee as the senate of British science — if not as degraded as a body as individuals were degraded,—to assert their dignity, till time did them justice, and select their presidents from a class who possessed knowledge and abilities to advance the cause of science.

He concluded by proposing the Rev. W. Vernon Harcourt as president for the ensuing year, as Sir J. Herschel had declined the nomination.

Sir John Herschel seconded the motion, and could not conceive any difference of opinion respecting it.

Carried unanimously.

Professor Sedgwick hoped that the local authorities would always be consulted in these arrangements; which Mr. Phillips said had been, in this instance, done.

Lord Northampton, Lord Dartmouth, Dr. Robinson, and Mr. Corrie, were elected the vice-presidents; Sir C. Lemon paying a high compliment to Lord Dartmouth, as having always taken a deep interest in the promotion of science.

The Marquess of Northampton acknowledged the honour conferred on him, and expressed his resolution to continue to do his utmost for the welfare of the Association.

Mr. Whewell denied that men of science were a degraded race in this country. They were not inferior to any foreigner in social estimation, or in any other respect. He was prevented from proceeding by a sort of general intimation that the subject was one which had better not be pursued.

Mr. Murchison and Mr. Peacock were re-elected general secretaries; Mr. Phillips assistant general secretary (declining any addition to his salary, though truly well merited), and Mr. J. Taylor general treasurer. The local secretaries elected were Mr. G. Barker, Mr. D. Blackiston, Mr. Hodgson, and Mr. Follet Osler.

Mr. Babbage rose, and declared he would no longer act as one of the trustees: he resigned.

The Marquess of Northampton agreed in the sentiments expressed by Mr. Whewell; and Mr. Sedgwick begged Mr. Babbage to reconsider the matter. He was himself a plebeian, but was amply contented that he received all the honours he deserved. He did not care for foreign feathers or distinctions; and thought Mr. Babbage should understand that no disrespect was shewn to him in not agreeing to his personal feelings.

Mr. Babbage repeated that he would not attend the council; and some other unpleasant remarks were made.

The Duke of Northumberland said he had always been taught to respect men of science; and he hoped it would not go forth that they were considered a degraded race. If so, it would be a great misrepresentation. He trusted Mr. Babbage would recollect that "*Concordiâ parva res crescunt, discordiâ maxima dilabuntur.*" (much applause.)

The committee almost immediately broke up.

SATURDAY.

Sir C. Lemon was in the chair.

Mr. Yates (accidentally omitted) had his name replaced on the council. Mr. Ehrenberg and Mr. Bache were elected corresponding members.

The minutes of last meeting confirmed.

Mr. Babbage said circumstances had arisen which rendered it impossible for him to act cordially with the council. He was proceeding to state why he could not do so, in consequence of differing with Mr. Murchison; and, therefore, he must persist in resigning, when

Sir C. Lemon observed, that he would regret such a step, but resignation, or abiding in office, must be an individual's own act, and it was not fair to call on the Association to interfere in it.

Mr. Murchison said he had completely explained his conduct to the satisfaction of the council: and here the subject, fortunately, dropped.

The recommendations from the committee were then read, as follows, for the ensuing year. We are not, perhaps, clear to a few pounds, but very nearly so.

SECTION A.—*Mathematics and Physics.*

100*l.* For the Reduction of Sir J. Herschel's Meteorological Observations.
200*l.* For the Reduction of the Stars in the Southern Hemisphere.
50*l.* For Arranging and Additions to the Nomenclature of the Stars.
100*l.* For the Completion of the Level Line between the Bristol and English Channels.
100*l.* For the Continuation of the Tidal Discussions.
500*l.* For the Reduction of the Stars in the Catalogue published by the Astronomical Society.
400*l.* For Magnetic Instruments (provided the Antarctic Voyage be undertaken).
50*l.* For the further Investigation of Waves.
100*l.* For the Translation and Circulation of Important Foreign Scientific Memoirs.
15*l.* For Tabulating the Observations of Messrs. Snow Harris, and Oastler.
8*l.* 10*s.* For Repair of Anemometer.
40*l.* For Expense of Meteorological Observations at Plymouth.
100*l.* For making Meteorological Observations at different parts of Scotland, at Oban, and some Central Place.
500*l.* For the Reduction of the Stars in the "Histoire Céleste."

2263*l.*

SECTION B.—*Chemistry and Mineralogy.*

40*l.* For Experiments on Atmospheric Air.
50*l.* For Experiments on the Action of Sea and River Water on Iron.
10*l.* For Experiments on the Continued Action of Heat at 212° Fahr. on Organic and Inorganic Bodies.
30*l.* For Determining Chemical Constants.
20*l.* For Electro-Magnetic Experiments on the Rocks in the Neighbourhood of Newcastle.

150*l.*

SECTION C.—*Geology and Geography.*

105*l.* For Researches into Fossil Ichthyology.
200*l.* For Information on British Fossil Reptiles.
20*l.* For Inquiries into the Depositions of Mud in Rivers.

325*l.*

SECTION D.—*Zoology and Botany.*

6*l.* For Experiments on the Preservation of Animal and Vegetable Substances.

SECTION E.—*Medical Science.*

50*l.* For the further Investigation of the Sounds and Motions of the Heart.
25*l.* For Inquiry on the Lungs and Bronchia.
25*l.* For Experiments on Medical Acoustic Instruments.

100*l.*

SECTION F.—*Statistics.*

150*l.* For the Statistics of Schools in England.
100*l.* For an Inquiry into the Condition of the Working Population of England.
50*l.* For Inquiring into the Statistics of the Collieries of Tyne and Wear.

300*l.*

SECTION G.—*Mechanics.*

50*l.* For Researches into the Duties of Steam Engines in Cornwall.
50*l.* For ditto, ditto, elsewhere.
50*l.* For Inquiry into the Speed of American Steamers.
200*l.* For Experiments on the Proper Forms of Vessels.
100*l.* For Experiments on Hot and Cold Blast Iron, also on Wrought Iron.
20*l.* For Investigating Railway Constants.
17*l.* For Steam Apparatus (Self-registering Steam Journal).
50*l.* 28*l.* 33*l.* For the Continuation of the Report to the Association on the Duties of Steam Engines.

599*l.*

Summary, shewing, also, the sums proposed by the Sections, but postponed or refused by the Committee of Recommendations:—

Section.	Granted.	Postponed or refused.
A.	£2263 10	£570
B.	150 0	100
C.	325 0	—
D.	6 0	50
E.	100 0	—
F.	300 0	100
G.	598 0	250
	£3742 10	£1070

	£.	s.	d.
Amount voted last year	3057	0	0
Claimed	1392	15	9

Receipts.

Balance, 31st July, 1837	£248	0	6
Compositions and subscriptions	2941	1	0
Dividend on 3 per cent stock	150	0	0
Sale of books	422	8	9
	£3761	10	3

Disbursements.

Expenses at Liverpool	279	6	0
Ditto local treasurers	151	18	10
Purchase of 1000*l.* consols	910	0	0
Salaries	375	0	0
Grants for scientific purposes	932	2	2
Printing	418	13	1
Petty expenses	10	16	7
Ditto	13	0	0
Balance in hand	670	0	7
	£3761	10	3

Property of the Association on the 31st July, 1838, in round numbers:—

	£.	s.	d.
Actual cash balance	670	0	7
Consols	5142	10	0
Unsold volumes, valued at	1000	7	6
Total	£6812	18	1

After the statement of the accounts, a discussion arose on the rejection, by the committee of recommendations, of a grant of 200*l.* proposed to them for bringing over to this country the American whose digestive processes were obvious through the hole in his side. As all the facts and observations on this extraordinary case have been published more than two months ago (see No. 1115) in the *Literary Gazette*, we cannot but think the refusal to comply with this request, perfectly justified.

Besides, the question of aiding individuals in useful pursuits, and of doing that for government, or wealthy public bodies, which they ought to do for themselves, is one of immense importance to the Association.

Another debate arose as to granting 100*l.* more for carrying on the experiments on waves and their resistance to vessels; but it led to no alteration in the vote suggested by the committee of recommendations.

The ordinary business of the meeting being ended, the chairman called upon Dr. Granville, who stated, that he rose in pursuance of the notice he had given, to present a requisition from a numerous body of the most influential members of the Association,—respecting the formation of a distinct Section for "Agricultural Science." Considering the late hour, and the thinness of the meeting, most of the members having gone elsewhere, to far *more interesting occupations*, he thought he should study the convenience of the members present, if he confined himself to the simple reading of the requisition, without any preliminary remarks or subsequent commenting; and move that it be received and entered on the minutes; declaring his intention, at the same time, of calling the attention of the general committee to it at their first meeting, in August 1839, at Birmingham. He must take upon himself the responsibility of acting in this manner, as he could not possibly have an opportunity of consulting with the numerous influential persons who had honoured him by confiding the requisition to him; but he thought that, for the interest of the requisitionists themselves, the success of the measure would be best secured by the course he had adopted.

Dr. Granville next proceeded to read the requisition, which was as follows, and the reading of which, particularly of the names, seemed to create a considerable impression.

"*The Requisition of certain Noblemen and Gentlemen, Members of the British Association, for the Establishment of an Agricultural Section.*

"The undersigned members of the British Association for the Advancement of Science, fully convinced that, in a country like Great Britain, every assistance which the agricultural interest can derive from scientific researches and scientific discoveries, ought to be afforded to it; and impressed with the belief that the British Association cannot direct a portion of its attention to a more national, a more worthy, or a more useful object, than that of procuring such assistance through the means of scientific inquiry, deem it their duty to submit to the general committee their opinion that a distinct Section, for the purpose just enumerated, ought to be established, to be entitled 'Agricultural Science.' The said Section to be governed by the general laws which regulate the other Sections, and by such other restrictive rules as in the wisdom of the general committee shall be deemed necessary, with the view to confine the operations of the Section to the pure investigation of scientific agricultural subjects. The undersigned feel, at the same time, that the origin of such a Section cannot take place in a more appropriate locality than the metropolis of a county so distinguished as Northumberland for agricultural improvement. Signed,

Tankerville; Ravensworth; P. J. Selby, V.P. Bristol Association; J. Yelloley, M.D. F.R.S.; R. Graham, M.D. F.R.S. Ed. Professor of Botany, University of Edinburgh; Robert Owen, New Lanark; Richard Fleetwood Shawe; Charles Atticus Monck; William Allen; Hewett Cottrell Watson; Charles Blackett, M.P. South Northumberland; J. Lambton Loraine; John Harbottle; Matthew Bell, M.P. South Northumberland; R. Robson Howich; Wm. Burrell, of Brougham Park; Sir Matthew Ridley, Bart.; Lieut.-Gen. Sir T. Brisbane, F.R.S.; Richard Hodgson, M.P. for Berwick; Rev. W. S. Gilly, D.D.; John Fawcitt; H. J. Spearman; Thomas Fenwick, South Hill; Edward Collingwood; W. H. Charlton; George Silvertop; Thomas Cookson; Wm. Cuthbert; Darnell Bulman, M.D.; Dixon Dixon; John Grey; Wm. Hodgson Gadsgan; J. W. Williamson; A. C. Askew; Rev. W. N. Darnell, Rector of Stanhope; J. M. Morgan; Isaac Cookson, High Sheriff for the County; Thos. Geo. Smith; Henry Blackett; Matthew Burrell; J.W. Liddell; James Dundas, of Dundas Castle; Williamson Peile; Rev. Th. W. Peile, Durham University; John Baird, Senior Surgeon Newcastle Infirmary; Dionysius Lardner, LL.D.; Sir Francis A. Mackenzie, Bart. Gairlod; Thomas Bates; Richard Grainger; J. Graham Lough; Golding Bird, M.D., Lecturer on Natural Philosophy; A. B. Granville, M.D. F.R.S.

Dr. Granville felt convinced, that a requisition for the attainment of a scientific object, signed by so numerous a body of individuals, who, from their rank in life, their profession, talent, high reputation and standing in the county, must be deemed very influential, had seldom been presented to a public assembly, and never before to the British Association. He hoped, indeed he knew, that it would have its proper weight, and he had only to repeat, that at the very first meeting of the general committee he should call the attention of the members to this all-important question, and submit a specific resolution founded on the declared wishes and opinion expressed in the requisition.

The motion that the requisition be received and entered on the minutes, with all the names, and that it be taken into consideration immediately after the commencement of the business at the first meeting of the general committee, in August 1839, was then put and carried.

Dr. Granville, without any preface, next moved,

"That in future, all propositions emanating from the council, either for the enactment of a new law or regulation, or the alteration of any already existing, shall be specially notified in the circular letters addressed to the members of the general committee, on the approach of each yearly meeting of the Association," which was carried unanimously.

The meeting then adjourned to some day in August, next year, at Birmingham.

The committee adjourned; many of the members sorry to have been detained so long from the splendid entertainment at Ravensworth.

REVIEW OF NEW BOOKS.

The Life of Hannah More, with Notices of her Sisters. By Henry Thompson, M.A. 12mo. pp. 399. London, 1838. Cadell; Edinburgh, Blackwoods.

THOUGH we have had several good biographies of this distinguished female, the present volume brings so much new and interesting matter into the field, that it will receive a hearty welcome from the public, and especially from that class of readers to whom religious topics are most acceptable.

Among the rest, a number of letters to Messrs. Cadells, furnish the particulars of most of her publications, and will reward the curiosity of literary readers. Without endeavouring to extract any of the novelties mixed up in the narrative from what has been published before, we shall be content to copy two original compositions from the Appendix:—

"*From the Spanish, an early Translation of Hannah More's.* *See p.* 11.

Cupid, the tyrant of the fair,
Purloin'd a lock of Delia's hair,
And with the golden cordage strung
The bow that 'cross his shoulders hung.

Pleas'd with the spoil, the urchin laugh'd,
And aim'd at me his deadliest shaft;
The shaft was sped on certain wing,
For Delia's air composed the string.

'Stop, mischief-making boy!' I cried;
'Thy bow and arrows lay aside;
With these new weapons keep the field;
Then I, and all mankind must yield.'

"The following verses to Miss Gwatkin (twelve years of age) are curious, as containing, at a period of Mrs. More's life when she was mingling extensively with the great and the gay, and was the object of general curiosity and fashionable adulation, a proof how deeply her mind had received those true principles of female excellence which were afterwards expanded in her 'Strictures,' 'Hints,' and 'Cœlebs.'

"Let others praise each true or fancied grace
Of Charlotte's person or of Charlotte's face;
Let others flatter,—be it mine to mend;
The best kind office of a real friend.
Friendship disdains to dictate lying lays;
It scorns to flatter, though it loves to praise.
Be yours each noble virtue of the mind,
Each fair accomplishment, each thought refin'd.
Study the truest knowledge to obtain;
'Tis slight acquirements make a woman vain.
The shallow stream loud rolls its noisy tide,
While deepest waters soft and silent glide,
Enrich the plains and valleys as they flow,
And freshness and fertility bestow.
Chief let humility your thoughts engage—
The fairest virtue of your sex and age;
Those who at too much admiration aim
Lose that to which they have a real claim.
She who the homage of mankind neglects,
Is sure to meet the reverence she rejects;
For who extorted dues but slowly pays,
To meekness renders voluntary praise.
The happy talent Nature has supplied
Demands your gratitude, but not your pride;
'Tis not a gift, 'tis but a loan at best;
Heaven will demand it back with interest.
Still make your studies, your employments, tend
To the best, wisest, and the noblest end;
So shall your bliss by just gradations rise,
A Christian here—an angel in the skies."

Raikes's City of the Czar.

[Conclusion.]

WE have reserved a few further illustrations of this light and cheerful volume, wherewith to mitigate the science in our current *Gazettes*. Of the ruler of Russia, Mr. R. says:

"If Napoleon chose to say in France, '*Le trône, c'est moi!*' with as much propriety may the Emperor Nicholas say, '*La Russie, c'est moi!*' He stands alone here, the great proprietor of all. In other countries there are the revenues of the state for public purposes, out of which is allotted a civil list for the use and maintenance of the reigning family; here, the public revenue and the public disbursements merge as completely in him as if it was a private estate. Here is no parliament to vote supplies, or cabinet council of ministers to declare war; a single ukase is sufficient for the first, and a supreme will for the second. What is called the senate has no concern with politics; it is a mere deliberative assembly, to hear appeals from the minor courts of justice, and is occupied with questions of internal arrangements for maintaining order in the provinces. The emperor is the sole director of the foreign relations abroad, the sole source of honours and emoluments at home. Each minister of state comes to him separately with his portfolio under his arm, and transacts the business of his department under his superintendence. The army, the navy, the civil servants, the public institutions, only form a part of his establishment; and, gigantic as the scale must be, the whole is submitted to his inspection: you may therefore judge of the boundless activity which forms a striking feature in his character. It must be impossible for one man to scrutinise such vast details; but he is indefatigable in his researches; and though surrounded by corruption in all its shapes, whenever he can lay his finger on a delinquent, be he high or low, he makes a sudden example of him, which terrifies and keeps the others on the alert. The following circumstance has just occurred, which may give a sample of his energy and vigour, even in what may be called a trifling instance. It is to be supposed that

some previous hint had been given him of frauds practised in the management of the great military hospital, and particularly of false charges made by the officer of that establishment who superintended the burials of the dead, for each of which a certain sum is allowed by government. The emperor, without appearing to notice the information, ordered his horse the other morning, and proposed to Prince Albert of Prussia, who is here on a visit to his sister, the empress, to accompany him in his ride. He directed his course, as if by chance, towards the hospital, where he arrived precisely at the moment when the gates were opened, and a funeral came out on its way to the place of interment. He stopped the humble procession, and instantly gave orders for the coffin to be uncovered, when it was at once ascertained that two dead bodies had been packed into it, in order that the director might pocket the sum allowed for the second funeral. Nicholas immediately sent for the wretched delinquent, and dismissed him from his office; but with such a severe reprimand, that he went home and cut his throat, where he now lies in a hopeless situation. * *

"No money is seen in circulation here, all is paper; blue, red, and white notes, torn and dirty, represent five, ten, and twenty-five roubles, &c.; they are the only medium of change, which never varies: an attempt to circulate foreign gold coin would be attended with great loss, as you would never obtain its real value. There exists a law to prevent this paper money from being carried out of the country, and, what may appear paradoxical, another to confiscate it if afterwards attempted to be introduced again. The rouble which, in former times, was worth from thirty-six to forty pence English, is now only worth tenpence in its paper shape. We have seen the time in England when a one-pound note was not intrinsically worth more than fourteen shillings; but here the depreciation, owing to the enormons issues of paper, is far more serious, the silver rouble being equal to three and a-half or four roubles of the latter. This paper-money has one advantage, that it never varies in value, but the original silver coin fluctuates daily, and is, therefore, almost entirely driven out of circulation in the common purposes of barter."

Russian baptism is represented as no joke; "It is always performed by immersion. In the rich houses, two tables are laid out in the drawing-room, by the priests; one is covered with holy images, on the other is placed an enormous silver basin, filled with water surrounded by small wax tapers. The chief-priest begins by consecrating the font, and plunging a silver cross repeatedly in the water: he then takes the child, and, after reciting certain prayers, undresses it completely. The process of immersion takes place twice, and so rigorously, that the head must disappear under the water; the infant is then restored to its nurse, and the sacrament is finally administered. In former times, when a child had the misfortune to be born in winter, it was plunged without pity under the ice, or into water of the same temperature. In the present day, that rigour has been relaxed by permission of the church, and warm water substituted for the other; but the common people still adhere scrupulously to the ancient practice in all seasons. On these occasions numbers of children are baptized at the same time on the ice, and the cold often proves fatal to them. It sometimes happens, also, that a child slips through the hands of the priest, and is lost, in which case he only exclaims, 'God has been pleased to take this infant to himself: hand me another;' and the poor people submit to their loss without a murmur, as the dispensation of heaven."

Of Russian literature the author observes—

"To talk of Russian literature, is to talk of that which does not exist, and never has existed; other countries have had their ancient bards and historians of their early days; but even the chronicles of this country have been handed down from the recollections of their neighbours; and, up to the present time, Russia has never produced a man of erudition who has made any real sensation in the literary world. Pouschkin is now lauded to the skies by his countrymen; but every thing is great by comparison; and they are well aware that they need fear no contradiction, while their own language is *lettre close* to the rest of Europe. There is, I see, a growing propensity to novel writing; but two or three of these productions which I have read in a *French garb*, possess little talent or originality. They are, evidently, feeble imitations of the German or Parisian school, without any forcible delineations of character: they abound in commonplace incident, shew little knowledge of real life, and disdain to give the reader any information on that point which would be really new and interesting—the every-day habits and occupations of Russian life."

The following introduces a singular character and some traits of manners.

"I have had various neighbours in my hotel since my arrival, of whom some curious anecdotes have transpired; but within the last few days great preparation has been making for a new guest from the interior provinces, Prince Yousoupoff, a great Tartar chief, and one of the richest subjects in Russia. He is possessed of very large estates, on which he occasionally resides in Asiatic splendour and dignity. He arrived in a large antique berline, and his suite in six sledges; the latter was composed of two secretaries and ten servants, a dwarf, who is forty years old, and not higher than my waist, with a whole menagerie of parrots, monkeys, and dogs. The prince himself is eighty-five years old: he is separated from his wife, whose family name was Engelhardt, a native of Germany, and who is widow of the famous Prince Potemkin: she has a considerable dower, and always resides at Petersburg. The principal residence of the prince is at Moscow, where he lives surrounded by regal magnificence; he has a private theatre in his palace, a band of thirty female vocal performers, and another of instrumental music, composed of slaves, to whom he has given the requisite education. It is very seldom that he visits this capital, as the nobles at Moscow retain all their ancient prejudices, bear with impatience the control of a court, dislike all modern, and particularly foreign, innovations, and are not supposed, generally, to be very favourable to the imperial government: they are called in this country the opposition; but it is an opposition backed by tremendous power and wealth, which must make them a formidable object of suspicion. This venerable satrap went last night to a ball at the Duc de Mortemart's, where he was the object of general remark. He was dressed in precisely the same uniform that he wore in the time of Catherine; indeed, he piques himself on never having changed any thing about him since that period; and, though his dress was antique, his manners proved that the *vieille cour* had much more dignity and high breeding than the *nouvelle*. Unlike the rest of his countrymen, he has seen a great deal of the world; and what St. Simon would call *du plus grand, et du meilleur*. It is more than fifty years since he was in England, when he knew Garrick, Sheridan, and other wits of that day; he also travelled with the Emperor Paul during his minority: he was much esteemed by Frederick the Great, who gave him the order of the Black Eagle, which he constantly wears. Such a man must be a mine of information to connect the two last generations together; and if all the anecdotes which he has witnessed could be published, it would form a work of the highest interest. A courtier, of the time of Catherine, making his appearance in the present day, dressed in the fashion of that period, gives the idea of an old picture walking out of its frame, or even of one risen from the dead. His wealth is immense: he has given his son, who has already married his second wife, an independent fortune, and remains himself possessed of one hundred and forty thousand slaves. This species of property is not always easily defined; but, in this instance, I hear it may be estimated at an obrok of forty-five roubles generally per head; the rich paying for the poor, and the young, who can work, paying for the old, who cannot. Those who have migrated from the soil, and betaken themselves to a trade or service, pay dearly for their lengthened chain; they may be rated from one hundred to five hundred, or six hundred roubles. As this income is paid regularly, without any deduction for taxes, some idea may be formed of the riches of this affluent nobleman. Some years ago his son lost a large sum at play to some of his brother officers in the service—which is no very unusual circumstance in this country, though not often to so large an amount, as this was said to be near three millions of roubles. The prince, without loss of time, on learning the intelligence, came post to Petersburg, with a view of complaining to the emperor, that his son had been pillaged. Alexander, after making the proper inquiries, very justly replied, 'Pay the money, which you can do with great facility; your son is old enough to take care of himself; and, moreover, no one obliged him to play; he must, therefore, take the consequences.' At every evening-party in this town, besides the usual rubber of whist, there is a table with dice, appropriated to the game of *passe dix*, at which a very dirty custom prevails. The scores are marked by each player with chalk on the card-table, and a little brush is used to alter the sums, as they vary, every minute, which has a very slovenly appearance; at times the brush is too actively employed in effacing a debt before it has been liquidated. Some years back at court, where the same custom likewise existed, the empress-mother, at the close of the game, found a deficiency in the sum which she was entitled to receive; and very naturally asked who was to make good her winnings. Mr. de ——, who was the real defaulter, and probably thought that his imperial creditor could not want the money, very calmly replied, 'Madame, ce sera, sans doute, Messrs. Brosse et Co., qui soldent tout.' As we are on the subject of play, I may add, that an incident occurred here the other day at the house of Madame ——, to which, though it is hushed up, I only allude, to shew that it came to my knowledge; and, as I have no wish to propagate evil reports, you will excuse my mentioning any names. A general officer, whose name is well known, was detected by one of his own friends in unfair play at ecarté, and publicly reproached with it: this circumstance has not prejudiced his reception in the

world, as it would have done in other countries."

With the annexed adieu to *The City of the Czar*, we also bid this agreeable volume farewell:

"It is said, that in London and Paris more than 20,000 persons rise in the morning without knowing where to procure a morsel of food, or lay their heads at night. Here the cheapness of provisions, the certainty of employment, and the indifference of the Russian as to nightly accommodation (for he will contentedly sleep on a stone or a plank), render him independent; while the conviction that he has a master who superintends his welfare as well as his labour, relieves his mind from all care for the present or thought for the morrow. There is nothing very attractive in the general aspect of the foot-passengers whom you meet. A foreigner is disgusted with the variety of beards which conceal their features and give them a squalid, dirty appearance; while the uncombed hair, which is cut short and square round the nape of the neck, is equally unbecoming; add to this the general winter attire, which consists of a sheep-skin worn inside outwards, and by constant use become filthy and rancid, and you will allow a Russian Mougik to be no agreeable neighbour even in the open air. The better class of tradesmen are more careful of their appearance, but the young men adopt a dress which is neither caftan nor great coat; and the beard, the only relic of the Asiatic costume, suits very ill with the rest. The women, no one knows why, have renounced the national dress entirely, and wear awkwardly enough a caricature imitation of the French fashions. The Russians are a charitable nation: there are very few beggars, I do not remember to have seen one in the streets; and they are in general ready to assist the distressed. If an escort of soldiers should pass conducting a band of prisoners, you may see the tradesman quit his counter, or the Ischvoshnik his sledge, to contribute something to their relief. At the door of every prison is placed a charity-box, into which even the lower orders silently drop their alms; the contents are examined at night, and it is never found to be empty. There is another point in which the Russians are distinguished from their more civilised neighbours, and it is to be hoped they may always continue to enjoy that distinction:—there are no suicides. The absence of immediate want preserves the lower orders from this act of desperation; and the higher classes, entirely occupied with an all-absorbing dread of the sovereign, are little prone to those romantic sentiments, or unruly passions, which lead to such fatal catastrophes in other countries. The unchangeable system of the government, which admits of no innovations, and excludes all party or political feeling, pursues steadily the beaten track. No change of ministry suddenly deprives a long list of dependants of the means of support; no revolution occurs to satiate the needy with the spoils of the rich, and drive a ruined man to acts of despair; no disappointed artist, or *grisette* crossed in love, seeks a refuge from her woes in a pan of charcoal or a watery grave; the nets of the Serpentine and the Seine would find little occupation in the stream of the Neva."

Some political addenda bring down the author's views to 1838, and will be read with interest.

MISCELLANEOUS.

Aristomenes, a Grecian Tale. 2 vols. London, 1838. Tyas. Edinburgh: Menzies.

In these two handsome volumes we find considerable power of writing mixed with unskilfulness of composition. The early wars between the Lacedæmonians and Messenians occupy the greater portion of the book, and are described with so much fidelity, that the reader enters fully into the spirit of each battle and skirmish, and follows the Messenian hero's career with great interest.

We have been somewhat amused by the modern English, both in character and language, which we find pervading these volumes. Alvattes, a kind of Flibbertigibbet, is a clever sketch, but as unlike an ancient Greek as pen and ink could paint him. Our author is at home in scenic description, and many passages of beauty shew the reader that to him nature has not been a sealed book.

A Brief History of Christ's Hospital, from its Foundation by King Edward the Sixth. Sixth Edition, with Illustrations and a List of the Governors. By J. J. Wilson. London, 1838. Vorst.

This little volume, reviewed by us some twenty years ago, has reached its sixth edition; a proof, at once, of its own intrinsic merits, as well as deserving of commendation at the time. It has been carefully revised and much fresh matter inserted, principally descriptive of the new buildings and other improvements connected with the establishment. A work like this must always find an interest, not only with the public at large, as silently, though influentially, its good effects are felt by society, but also with individuals who wish to be acquainted with the nature and character of the foundation, endowments, advantages, and privileges of this valuable charity. There is a peculiarity in this publication calculated to continue its worth, and to make it of importance to all who wish or hope for presentations — that is a complete list of the governors, in whose power these presentations are vested; these, after the lapse of years, as in the present instance, must be renewed.

Ancient usages, customs, and characters, are brought into view, as well as modern instances of many who have done credit to themselves and their country, who received their education in this royal foundation; and the author has used diligent research in order to give the early history of Christ's Hospital correctly. While the characters of the boys, their habits and peculiarities, from the pen of the late Charles Lamb, must interest readers of every class, but peculiarly so that of the boys of Christ's Hospital in after life: and we again recommend the volume to the attention of the public, as well for what it contains, as for the good sense and good feeling with which it is written.

Duty and Inclination. A Novel. Edited by Miss Landon. 3 vols. London, 1838. Colburn.

The name of Miss Landon graces the title-page of these volumes as editress, and should be guarantee for the merits of the following pages, which she introduces to the reader in a prettily written Preface. All that could be done for her foster-child, Miss Landon has done; and we can only regret so much care has been wasted upon the offspring of shallow intellect and presumption. A more tedious, trashy, and uninteresting novel, it has seldom been our ill-luck to have to wade through.

Tales of the Great and Brave. Pp. 322. (London, Harvey and Darton.)—A pretty book for good boys; in which the stories, the Black Prince, Wallace, Robert the Bruce, Joan of Arc, Cœur de Lion, Charles Edward Stuart, Nelson, and Napoleon, are reduced to their calibre. Where, among other points, did the author learn that Wellington led the final charge against the French old guard, at Waterloo, "on foot," or any way? We must not, however much we may desire it, look for historical accuracy in productions of this class. Not one in five hundred go deeper than common report and newspaper authority.

Flora of Shropshire, by W. A. Leighton. 8vo. pp. 104. (London, Van Voorst; Shrewsbury, Davies.) — A well-arranged and seemingly very complete *Flora of Shropshire*, rich in botanical wealth.

The First Principles of Medicine, by Dr. Billing. 8vo. pp. 288. (London, Highley.) — Edition the *third*; and that little word is enough to shew that, as a medical work, this volume must be much approved.

FINE ARTS.

NEW PUBLICATIONS.

Whole-length Portrait of the Queen. Engraved in Mezzotinto, by James Scott, from a Painting by A. Aglio. Boys.

Her Majesty is represented standing, and in her robes of state; and the skill of the artist is seen in the management of the effect, in that the splendour of decoration in no way interferes with the features or figure. The attitude is simple and dignified, and the arrangement and accessories appropriate. This print is dedicated to the nation; and, among others that demand attention from the public, will, we doubt not, have its claims allowed.

Her Most Gracious Majesty Queen Victoria, in her Chair of State, attended by the Duchess of Sutherland and the Marchioness of Normanby. Engraved in Mezzotinto, by Reynolds, from an Original Picture by Stewart. M'Lean.

Our young Queen, whether in the chair of state, or seen in the more familiar habits of princely life, must ever be an object of interest, and of public gratulation; and thus attended, offers another charm to the varieties under which she has been represented.

Findens' Portraits of the Female Aristocracy of the Court of Queen Victoria. Second Number. Fraser.

It may always be considered, that when the first number of a work or the first portion of a series connected with the arts appears, that the publisher has pledged himself for the character of those which are to follow. In this instance the Messrs. Finden have well redeemed their pledge; both in taste of the selection, and the skill with which the work is executed. The Number contains "The Countess of Falmouth," engraved by Egleton from a drawing by A. E. Chalon; "Lady Wilhelmine Stanhope," A. A. Chalon, Finden; "The Lady Frances Cowper," J. Hayter, W. H. Egleton.

Twelve Etched Outlines, from Sketches. By Charles Wild. Second Series.

The careful and finished style in which these etchings are executed, and the taste and judgment displayed in their selection as subjects for the pencil, cannot be commended too highly. The edifices brought into view, as well interior as exterior, are in the first character of the picturesque; some of them elaborately ornamented, and the figures introduced as accessories to the building, are perfectly appropriate. Among those which struck us as eminently beautiful are "The Mansion House, Louvain;" "The Collegiate Church of St. Peter's, Louvain;" "Nave of the Church of the Barefooted Carmelites, Ghent;" "View in the Church of St. Anne's, Bruges;" "Hotel de Bourgtherold, Rouen;" "View in the Church of St. Remi, Dieppe;" "Part of the Nave, Transept, and Choir of the Cathedral, Amiens;" "Chapel of Notre Dame du Puy, Cathedral of Amiens," &c. They are each accompanied by a descriptive account; and the

engravers, Messrs. Lee, Le Keux, Turnbull, and Rawle, have done ample justice to their prototypes, and great credit to their own talents.

DRAMA.

English Opera.—Miss P. Horton has taken the place of Mrs. E. Seguin, and, during the last week, played and sung the part of *Medora*, in the *Devil's Opera*, very nicely. A trifle, called the *Gray Doublet*, from the pen of Mark Lemon, was produced on Tuesday, in which Miss Melville and Miss Poole looked most dangerous as young cavaliers. Mr. Compton was quaint, as usual, as *Simon Bung*, a tapster; and Mr. Burnet sang a very sweet ballad. The little piece was successful, and has been played every evening since.

VARIETIES.

Statue of Dr. Johnson.—The "Staffordshire Examiner" contains a lively account of the opening ceremony upon the erection of a statue of Dr. Johnson, executed by Mr. Lucas, and presented to his native city of Lichfield, by Mr. Chancellor Law. The statue is erected near the centre of the market-place, opposite to the house in which Johnson was born. The pedestal stands ten feet, and the statue is seven feet more—the whole of a block of magnesian limestone, from Yorkshire, of remarkable beauty, which weighed nine tons. It is nearly as hard as granite, of dazzling whiteness, and is said never to turn green. The figure is in a sitting posture, seated a little awry in his chair, as was the doctor's habit, and leaning with his face on his right hand. The basreliefs on the front, left, and right side, represent—'His Penance in Uttoxeter Market;' secondly, 'Thus he was borne from School;' and, thirdly, 'Listening to Dr. Sacheverell preaching.' In the first, he stands in a pensive mood, at an advanced period of life; in the second, he is on the shoulders of his schoolfellows; in the third, he is carried by his father.

Diplomatic Correspondence in 1793.—On the fourth of April, 1793, the National Convention of France appointed Jean Baptiste Noel Bouchotte, minister of war,—he had previously been quarter-master of the regiment of Esterhazy hussars, and was, at that time, temporary commander of Cambray. There rarely passed a sitting of the Convention, in which was not signalised some abuse, or some instance of incapacity of the new minister of war. One day, news arrived that the departments on the right of the Loire were in rebellion. The committee gave orders for the sending a troop of the national *gendarmerie*, after having furnished them with horses. The minister Bouchotte was sometimes timid and cautious, and, in this instance, he conceived it necessary to ascertain whether it was expected that he should send saddles with the horses. This message raised the indignation of the committee, and Danton, snatching up a sheet of paper, wrote the following letter, which was signed by two other members of the committee—

"*The Representatives of the People, composing the Committee of Public Safety, to the Minister of War and his adjoints.*

"Liberty, Equality, Fraternity.

"Go, and be d—d! The devil take you, if you need orders for the saddles when you are directed to furnish horses. Perhaps you will want orders for sending the bridles next!"—Signed, "Danton, Robert Lindet, Cambon, *fils aîné.*"

The minister received this despatch with the greatest composure, and placed it among the archives of his office, where it is still preserved.

Gustave Basslé.—Among the philosophical exhibitions at the British Association, the wonderful abilities of this boy have made quite a sensation. His mnemonical *conversazioni* have (we hear) delighted the president and his duchess, and the exhibition of his powers in public has surprised every one.

Mangiarnele, the Sicilian mathematician, has, also, been among the philosophers, and astonished them with his cubic equations.

Gaelic Professor.—There are 1300*l.* subscribed for the endowment of a professor of Gaelic, in Trinity College, Dublin, and the Provost and Fellows have agreed to allow the incumbent 50*l.* a-year, with apartments. We shall thus see the intentions of the Hon. Henry Flood, who made a most munificent bequest for this purpose, which was unfortunately set aside, carried into effect, and there will then be a seminary where Protestant clergymen can receive education in the language of the people over whose spiritual interests they may be called to preside.

Theatrical Portraits.—We have received two pretty lithographic drawings; one of Fanny Elssler in the "Brigand of Terracina," the other of Miss Rainforth as Rosetta, in "Love in a Village;" they are both drawn from life by Mr. Weld Taylor, and are very neatly executed.

LITERARY NOVELTIES.

Messrs. Fullertons and Co., of Glasgow, announce a new edition of Percy's Reliques of Ancient English Poetry, with an Introduction and Notes, by Mr. George L. Craik, on the Ballad Poetry of England and Scotland.

In the Press.

The Devoted One, and other Poems, by Dugald Moore.

LIST OF NEW BOOKS.

Lives of Eminent Literary and Scientific Men of Great Britain, Vol. III. (Dramatists, forming Vol. CVI. of the Cabinet Cyclopædia), f.cap 8vo. 6*s.*—A Dictionary of the Anglo-Saxon Language, by the Rev. J. Bosworth, LL.D., royal 8vo. 30*s.*; Ditto, with Dissertation on the Origin and Connexion of the Germanic Tongues, &c., 2*l.* 2*s.*; and the Dissertation separate, 20*s.*—Dr. Lingard's History of England, Vol. VII., f.cap, 5*s.*—Act for Abolishing Imprisonment for Debt, by Wells, 12mo. 2*s.* 6*d.*—Questions and Answers, deduced from Goldsmith's Roman History, 12mo. 2*s.* 6*d.*—Corney's Curiosities of Literature, and Illustration of D'Israeli, post 8vo. 7*s.* 6*d.*—The Last days of Aurelian; a Romance, by the Author of "Zenobia," 2 vols. post 8vo. 12*s.*—Introduction to the Study of Ecclesiastical History, by J. G. Dowling, 8vo. 9*s.*—The Parochial System, an Appeal to English Churchmen, by Rev. H. W. Wilberforce, 12mo. 3*s.* 6*d.*—Short Family Prayers for every Day in the Month, 12mo. 3*s.*—Three Expeditions into the Interior of Eastern Australia, by Major T. S. Mitchell (Ninety Plates), 2 vols. 8vo. 2*l.*—Act for Abolishing Imprisonment for Debt, by T. E. Tomlins, 12mo. 2*s.* 6*d.*—Robt. Hall's Sermons, Essays, and Reviews, new Edition, with a Life, 12mo. 5*s.*—Peter Parley's Visit to London during the Coronation, 3*s.* plain; 4*s.* coloured.—The Science of the Cerebro-Spinal Phenomena, attempted by J. S. Waugh, M.D. 12mo. 6*s.*—History of the British Zoophyte, by G. Johnston, M.D. 8vo. 30*s.*—Recollections of a Tour in the North of Europe, in 1836, 37, by the Marquess of Londonderry, 2 vols. 8vo. 24*s.*—Skinner's Overland Journey to India, new Edition, 2 vols. post 8vo. 12*s.*—Companion to the Book of Common Prayer, 12mo. 1*s.*—Incidents of Travel in Egypt, Arabia, &c. (original American edition), 2 vols. 12mo. 12*s.*—Zenobia; or, the Fall of Palmyra, a Historical Romance, 2 vols. post 8vo. 12*s.*—Probus; or, Rome in the Third Century, by the Author of "Letters from Palmyra," 2 vols. 12mo. 12*s.*—Burton; or, the Sieges, a Romance, 2 vols. 12mo. 10*s.* 6*d.*—Critical Grammar of the Hebrew Language, by J. Nordheimer, royal 8vo. 15*s.*

TO CORRESPONDENTS.

☞ *To Correspondents, &c.*—At this season of the year it is most expedient that all communications for the *Literary Gazette* should be sent as early as possible in the week.

Our Newcastle matter is so pressing, that we are reluctantly compelled to leave out notices of many new and interesting works; among others, we may mention Mr. James's concluding volumes of Louis XIV., the Marquess of Londonderry's Northern Tour, and Colonel Mitchell's Australia, besides a variety of minor productions, to all of which we will pay our earliest attention.

We have repeatedly stated, that we cannot reply to correspondents unless they address us early in the week; we have, however, to ask the kind indulgence of several, whose favours will be acknowledged as early as possible.

ADVERTISEMENTS,
Connected with Literature and the Arts.

POLYTECHNIC INSTITUTION.
Incorporated by Royal Charter.
Now Open, 309 Regent Street (near Langham Place), extending into Cavendish Square. The Great Hall has a surface of 700 feet of water, in which a diver is occasionally at work, and into which a diving-bell descends with four or five persons. In the extensive Rooms are arranged the most interesting Models and Machinery, some of which is in motion, by Lord Dundonald's Rotary Steam-Engine. A magnificent Hydro-Oxygen Microscope, by Cary, and a variety of interesting Works of Art.
Open daily from Ten o'Clock to Six. Admission, 1*s.*
N.B. A Lecture on some Scientific Subject delivered every day at Two o'Clock.

UNIVERSITY of LONDON.
FACULTY of LAWS.
The first Examination for the Degree of Bachelor of Laws in this University will be held in the Month of November, 1839.
Candidates must send in their applications to the Registrar before the 15th of April next.
Somerset House, August 24, 1838.

UNIVERSITY of LONDON.
FACULTY of ARTS.
The following subjects of Examination in Classics have been selected:
For the Matriculation Examination in 1839—
Hom. Il. Book V.
Cicero de Senectute and de Amicitiâ:
For the Degree of Bachelor of Arts in 1839—
The Antigone of Sophocles,
The Agricola, Germania, and the First Book of the Annals of Tacitus:
For the Matriculation Examination in 1839—
Xenophon—the First Book of the Memorabilia;
Horace—the Third Book of the Odes.
R. W. ROTHMAN, Registrar.
Somerset House, August 24, 1838.

Part IX. of
RYALL'S PORTRAITS of EMINENT CONSERVATIVES and STATESMEN, containing highly finished Engravings of
The Right Honourable the Lord Viscount Canterbury;
The Right Hon. Sir Geo. Murray, G.C.B. G.C.H. &c.; and
A. R. Dottin, Esq. M.P.
Each Portrait is accompanied with a Memoir of the chief Political Events in the Lives of those distinguished Conservatives.
Published by Ryley and Co. 8 Regent Street; by J. Fraser, 215 Regent Street; and F. G. Moon, Threadneedle Street.

BOURNE'S DRAWINGS OF THE LONDON AND BIRMINGHAM RAILWAY.
Just published, price One Guinea, No. I. of
LITHOGRAPHED DRAWINGS of the LONDON and BIRMINGHAM RAILWAY.
By J. C. BOURNE.
With Descriptive Accounts by J. BRITTON, F.S.A.
The first Number of this Work (to be completed in four Parts, in large folio) contains eight Drawings, representing the following objects, viz.—1. View of the South Front of the London Grand Entrance; also, a Vignette View of the North Front—2. Bridge and Excavation under the Hampstead Road—3. The Iron Bridge over the Regent's Canal—4. The Locomotive Engine-House at Camden Town, with Chimney Shafts to Stationary Engines, &c.—5. Entrance to the Watford Tunnel—6. Horse-Runs on the Embankment at Boxmoor—7. The Embankment at Wolverton during its Progress—8. Viaduct over the Avon, with Descriptive Accounts of each Scene, and Remarks on the Railway System of Communication, its Object, and Effects.
London: J. C. Bourne, 19 Lamb's Conduit Street; Ackermann and Co. Strand; Weale, 59 High Holborn; Grapel, Liverpool; Lowler, Manchester; Drake, Birmingham; Strong, Bristol; Collings, Bath; W. F. Watson, Edinburgh; and Niven, Jun. Glasgow.

Now ready,
HINTS on LIGHT and SHADOW, COMPOSITION, &c. as applicable to Landscape Painting. Twenty Plates, containing 63 Examples, executed in the present improved Method of Two Tints.
By SAMUEL PROUT, Esq. F.S.A.
Painter in Ordinary in Water Colours to Her Majesty.
Imperial 4to. cloth, lettered, price 2*l.* 2*s.*
London: Ackermann and Co. 96 Strand.

BOOKS IN THE PRESS.
Preparing for Publication,
I.
In imperial 8vo.
OPERATIONS CARRIED ON at GIZEH, in 1837; also an Account of a Voyage into Upper Egypt. Illustrated with Drawings and numerous Woodcuts.
By Colonel HOWARD VYSE.
II.
In columbier folio,
The Pyramids of Gizeh,
From actual Survey and Admeasurement.
Illustrated with Notes and References to the several Plans.
By J. E. Perring, Esq. Civil Engineer.
With Sketches taken on the Spot by E. I. Andrews, Esq.
*** The First Part, containing the Great Pyramid, is nearly ready.
III.
In imperial folio,
The Hieroglyphics on the Coffin of Mycerinus,
Found in the Third Pyramid of Gizeh.
With Letterpress Descriptions.
James Fraser, 215 Regent Street.

BOOKS PUBLISHED THIS DAY.

NEW WORKS.

I.

RIDDLE'S LATIN DICTIONARY, complete. 1 thick vol. 8vo. price 1*l.* 11*s.* 6*d.* cloth.
Or in separate Portions, viz.
The English-Latin, price 10*s.* 6*d.* cloth.
The Latin-English, price 1*l.* 1*s.* cloth, which may also be had in an abridged form, for the Use of Schools, price 7*s.* bound.
*** An Abridgement of the English-Latin is in preparation.

II.

IRISH MELODIES. By Thomas Moore, Esq. With an Appendix, containing the original Advertisements, and the Prefatory Letter on Music. 13th edition, f.cap 8vo. with Vignette Title-page, 10*s.* cloth, lettered.

By the same Author,

Lalla Rookh. F.cap 8vo. with Four Engravings after Westall, 10*s.* 6*d.* cloth.

III.

INSTRUCTIONS to YOUNG SPORTSMEN. By Lieut.-Col. P. Hawker. 8th edition, greatly enlarged.
"The very best book we have on the subject."—*Blackwood's Magazine.*

IV.

THE DOCTOR, &c. Vol. V. Post 8vo. 10*s.* 6*d.* cloth.
Vols. I. to IV. 2*l.* 2*s.*
"We cannot look into a page without some desire to quote from it, the wealth of its humour and literature is so abundant."—*Examiner.*

V.

LIFE and ADMINISTRATION of EDWARD, FIRST EARL of CLARENDON. By T. H. Lister, Esq. 3 vols. 8vo. Portrait, 2*l.* 8*s.* cloth lettered.
"One of the most interesting publications that has issued from the modern press."—*St. James's Chronicle.*

VI.

COLONIZATION and CHRISTIANITY; a Popular History of the Treatment of the Natives in all their Colonies by the Europeans. By W. Howitt. 1 vol. post 8vo. 10*s.* 6*d.* cloth.
"Conducted with much ability and discretion."—*Atlas.*

VII.

A HISTORY of PRICES, with Reference to the Causes of their Principal Variations, from 1792 to the present Time. With a Sketch of the History of the Corn Trade. By Thomas Tooke, Esq. F.R.S. 2 vols. 8vo. 36*s.* cloth, lettered.
"Displays a profound knowledge of the subject."—*Atlas.*

VIII.

A PRACTICAL TREATISE on RAILROADS, and Interior Communication in general. By Nicholas Wood. 2d edition, greatly enlarged, containing several new Engravings, 31*s.* 6*d.* in cloth.
"We confidently recommend it to the notice of the engineering student."—*Civil Engineer.*

IX.

A TREATISE on ROADS. By the Right Hon. Sir Henry Parnell, Bart. 2d edition, Nine Plates, 21*s.* cloth.
"Every country gentleman ought to study it."—*Architect Mag.*
London: Longman, Orme, and Co.

In f.cap 8vo. with Vignette, 6*s.* cloth, Vol. III. of

LITERARY and SCIENTIFIC MEN of GREAT BRITAIN, containing Biographies of the Principal Dramatists, from 1600 to 1811.
Being Vol. 108 of "The Cabinet Cyclopædia."
Published Aug. 1, Lives of the Literary and Scientific Men of France, Vol. I. By Mrs. Shelley and others.
London: Longman, Orme, and Co.; and John Taylor.
*** A detailed Catalogue of "The Cabinet Cyclopædia" may be had of any Bookseller.

URE'S DICTIONARY of ARTS, MANUFACTURES, &c. In 8vo. Part I. and No. 1, to be completed in Ten Monthly Parts, price 5*s.* each, and Fifty Weekly Numbers, price 1*s.* each, illustrated by upwards of One Thousand Engravings on Wood, of a

DICTIONARY of ARTS, MANUFACTURES, and MINES; containing a clear Exposition of their Principles and Practice.
By ANDREW URE, M.D. F.R.S. M.G.S. M.A.S. &c.
*** Specimens, with Prospectus, may be had of all Booksellers.
London: Longman, Orme, and Co.

Price 2*s.* 6*d.* No. VII. of

MONTHLY CHRONICLE.

Principal Articles.

Lord Durham's Mission	Modern Engraving
On various Influences on Animal and Vegetable Bodies erroneously imputed to the Moon	Duke of Wellington (concl.)
	Musical Literature
	Speed on Railways
Poetry of Thomas Campbell	Kentish Fanatics,
	&c. &c.

London: Longman, Orme, and Co.

MRS. MARCET'S NEW WORK.
In f.cap 8vo. with a coloured Map, shewing the Comparative Altitude of Mountains, price 5*s.* 6*d.* cloth lettered,

CONVERSATIONS for CHILDREN, on Land and Water.
By Mrs. MARCET.
London: Longman and Co.
Of whom may be had, by the same Author,

Conversations on Natural Philosophy. 8th edition, 10*s.* 6*d.*

Conversations on Chemistry. 13th edit. 14*s.*

Conversations on Vegetable Physiology. 2d edition, 12*s.*

Conversations on Political Economy. 6th edition, 9*s.*

COMPANION TO "THE DIARY OF AN INVALID."
In 1 vol. crown 8vo. price 9*s.* cloth lettered,

NOTES on NAPLES and its ENVIRONS, and on the Road to it from Rome.
By a TRAVELLER.
James Bohn, 12 King William Street, Strand.

SPLENDID ILLUSTRATIONS OF THE BIBLE AND PRAYER.
In One Volume royal 8vo. illustrated with 689 Wood Engravings.

THE PICTORIAL EDITION of the BOOK of COMMON PRAYER. With Notes and an Introductory History of the Liturgy.
By the Rev. H. STEBBING, M.A.

	£.	*s.*	*d.*
Price, bound in cloth, and lettered	1	11	6
— calf, with gilt edges	2	0	0
— neat morocco or russia	2	2	0
— morocco or russia elegant	2	5	0

Also, just completed, in Three Volumes royal 8vo. uniform with the Prayer-Book, illustrated with more than 300 Woodcuts,

The Pictorial Edition of the Holy Bible. With Original Notes, chiefly explanatory of the Engravings, and of such Passages connected with the History, Geography, Natural History, and Antiquities of the Sacred Scriptures as require observation.

	£.	*s.*	*d.*
Price, bound in cloth, and lettered	3	0	0
— calf lettered	3	15	0
— morocco or russia	4	10	0
— morocco or russia elegant	5	10	0

The Quarto Edition of the Pictorial Bible, Vols. I. and II. 1*l.* 2*s.* 6*d.* each.
London: Charles Knight and Co., Ludgate Street.

MISS MARTINEAU'S NEW WORK.
In 8vo. price 8*s.* 6*d.* bound in cloth, and lettered,

HOW to OBSERVE—Morals and Manners.
By HARRIET MARTINEAU.
Contents:—Part I. Requisites for Observation.
Part II. What to Observe—Religion, Churches, Clergy, Superstitions, Suicide—General Moral Notions—Love of Kindred and Birth-place, Character of Prevalent Pride and Popular Idols, Epochs of Society, Literature and Philosophy. Domestic State—Soil and Aspect of the Country, Markets, Agricultural, Manufacturing, and Commercial Classes, Health, Marriage, and Woman. Idea of Liberty — Police, Legislation, Servants, Newspapers, Schools, Persecution. Progress, Conditions of Progress, Charity, Arts and Inventions, Multiplicity of Objects. Discourse.
Part III. Mechanical Methods.

Also,

HOW to OBSERVE—Geology. By H. T. De La Beche, F.R.S. With 138 Woodcuts. The Second Edition, price 10*s.* 6*d.*
London: Charles Knight and Co., 22 Ludgate Street.

INDUSTRIAL GUIDE-BOOKS.

I.

THE GUIDE to SERVICE—the LADY'S MAID, price 1*s.*

Also,

A new edition of the Maid of all Work, price 8*d.*

II.

The Guide to Trade—the Printer, illustrated with Woodcuts, price 1*s.*
The above form the commencement of a series of Industrial Guide-books.
To supply a manifest deficiency in the books already published for the education of the industrial classes, the publishers have undertaken a series of works (which will be brought out at the cheapest rate), whose chief object is to prepare young persons for the choice of an occupation, by instructing them in the peculiar duties, and, as far as requisite, in the technical details of the various departments of Service or Trade in which they are likely to be engaged as they advance in life. It is, of course, not contemplated herein to teach every thing that should be known in a trade, or to point out the whole details of a service,—but to give such a general knowledge of the occupations which the mass of the people are called upon to follow, as may prepare the young for the proper discharge of their duties, and systematise much of the practical information which the adult has now, in most cases, to learn without a guide. These works will, collectively, contain a mass of authentic and amusing information on the various departments of industry in this country, which will be useful and interesting to all readers. They will be illustrated, when necessary, with numerous explanatory woodcuts.
London: Charles Knight and Co., 22 Ludgate Street.

Price 7*s.*

THE PRACTICAL NATURE of the DOCTRINES and ALLEGED REVELATIONS CONTAINED in the WRITINGS of the HON. E. SWEDENBORG: together with the peculiar motives to Christian Conduct they suggest. In a Letter to his Grace the Lord Archbishop of Dublin, occasioned by his observations on that subject in his Essays on some of the peculiarities of the Christian Religion.
By the Rev. AUGUSTUS CLISSOLD, M.A.
Formerly of Exeter College, Oxford.
London: J. S. Hodson, 112 Fleet Street; Longman and Co., Paternoster Row; Simpkin, Marshall, and Co., Stationers' Hall Court, Ludgate Street; Whittaker and Co., Stationers' Hall Court, Ludgate Street; and by all Booksellers.

BLACKWOOD'S EDINBURGH MAGAZINE. No. CCLXXV. for September.
Contents:
I. Christopher among the Mountains—II. The Reciprocity and Colonial Systems—III. Legendary Lore. Land and Sea—IV. Whig-Radical Corruption — V. Memoranda of Our Village, and its Founders — VI. Letters of an Attaché — VII. Love and Geology—VIII. Sophocles, Trachiniæ—IX. Lines, suggested by a Poem called the "Flight of Youth"—X. Coronation Sonnets —XI. The Sentiment of Family Antiquity—XII. The Alcestis of Euripides. Translated by Mr. Chapman.
William Blackwood and Sons, Edinburgh; and T. Cadell, Strand, London.

New Work, by the Author of "The Spas of Germany," "St. Petersburg," &c., price 10*s.* 6*d.*

COUNTER-IRRITATION. Its Principles and Practice Illustrated by One Hundred Cases of the most Painful and Important Diseases effectually Cured by External Applications.
By A. B. GRANVILLE, M.D., F.R.S.
Published by John Churchill, Gerrard Street, Soho.

Price 9*s.* in cloth,

THE PRACTICE of HOMŒOPATHY.
By P. F. CURIE, M.D.
Physician to the London Homœopathic Dispensary.
And, by the same Author,
Principles of Homœopathy.
1 vol. 8vo. 7*s.* cloth.
London: Thomas Hurst, 5 St. Paul's Churchyard; and J. B. Baillière, 219 Regent Street. Paris: Chez J. B. Baillière, 13 Rue de l'Ecole de Médecine.

Royal 8vo. 12*s.*
THE REMAINS OF THE LATE

LORD VISCOUNT ROYSTON, with a Memoir of his Life.
By the Rev. HENRY PEPYS, B.D.
Prebendary of Wells.
John Murray, Albemarle Street.

With Portraits, &c. 5 vols. post 8vo. 45*s.*

MEMOIRS of the LIFE of WILLIAM WILBERFORCE.
By his SONS.
John Murray, Albemarle Street.

Vols. I. and II. 8vo.

MEMOIRES SECRETS (De 1770 à 1830).
Par M. le Comte D'ALLONVILLE,
Auteur des "Mémoires tirés des Papiers d'un Homme d'Etat."
These Memoirs, by the celebrated Author of "Mémoires d'un Homme d'Etat," are creating great sensation in Paris.
London: Dulau and Co., 37 Soho Square.

FRASER'S MAGAZINE for September,
Price 2*s.* 6*d.* contains:—

Life of Wilberforce	The Religious Periodical Press
Jack among the Lawyers; or, the Cruise on Shore of Bill George and Ned Blake, of her Majesty's Ship Magna Charta	Autobiography of the Hammersmith Ghost
	Specimens of Persian Poetry
Channing's Remarks on Napoleon Bonaparte	Little Men and Little Measures.
	The Earl of Durham
Whigs and Tories. No. III.	Homeric Ballads. By Dr. Maginn. No. IX. The Prophecy of Theoclymenus
Greek Comedy, the Birds of Aristophanes. No. II.	
	Conservative Policy, for 1838-9.

James Fraser, 215 Regent Street, London.

THE CARTHUSIAN, No. IV.
Contents:

Brooke Hall	A Legend of Lamreagh
The Monk's MS.	Farewell to Chapman and Penny
Ballad from the Spanish	A Chapter on Puffs
Letter to H. Mowbray	Essay towards a Biography of Horace
Mythologics. No. V.	
The Wild Huntsman	&c. &c. &c.
Carmen Carthusianum	

S. Walker; Simpkin, Marshall, and Co.; Sherwood and Co.
Communications for No. V. addressed to the Editors, 88 Bartican.

The September Number of

COLBURN'S NEW MONTHLY MAGAZINE and HUMORIST,
Edited by THEODORE HOOK, Esq.
Contains the following interesting articles:

The Gurney Papers. By the Editor	The American Bobadil. By T. C. Grattan, Esq.
Admiral Lord Mizzendeck's Narrative. By the late Watty Cockney, Esq. Edited by the Author of "Paul Pry"	Retrospection
	Letters from Ireland. By J. Carne, Esq.
Music Mad. By one of the Authors of "Rejected Addresses"	The Lesson of Life. By Douglas Jerrold, Esq.
	The Manager's Note-Book. No. II. Nell Gwynne, Alexander Pope
Shakspere's Historical Plays. By the Right Hon. T. P. Courtenay	Papers of a Gentleman at Arms. Edited by H. Brownrigg, Esq.
Etiquette	Hagar
Steam Voyage from London to Paris. By M. J. Quin, Esq. (Concluded)	Conversazione on the Literature of the Month, &c.

Henry Colburn, Publisher, 13 Great Marlborough Street.

The New Number of

THE METROPOLITAN for September, will contain the following Original Articles:

1. Father Love, by the O'Hara Family	7. Autumnal Trees, by T. J. Ouseley
2. The British Museum, by the Author of "Random Recollections," "Great Metropolis," &c.	8. Mems. in the Mediterranean, by Launcelot Lamprey
	9. Absurdities of Human Life
3. Snatches of Song, by Mrs. C. Baron Wilson	10. The Courtier of the Reign of Charles II., by Mrs. C. Gore
4. Musea Moribunda	11. The British Patriot's Song, by T. Ragg
5. Shakspere Fancies, No. II. Desdemona and Felicia Dorothea Hemans	12. Of Absence
	13. A Voyage to St. Kilda
6. Johanna Huntingdon, by the Author of "The Reformer"	14. The Sign Painter of Naples
	15. Hymn to Sunset.

Reviews, Notices of New Works, Literary Intelligence, &c. &c.
Saunders and Otley, Conduit Street, Hanover Square.

In 12mo. price 2s. in cloth, lettered,

SHORT FAMILY PRAYERS for every Morning and Evening of the Month, and for Particular Occasions. Taken from the Liturgy, Psalms, and various Eminent Writers.

By a MEMBER of the CHURCH of ENGLAND.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

Price 2s. each, in boards,

DEVOTIONS for FAMILY USE.

Devotions for Private Use.

By the Rev. CHARLES GIRDLESTONE, M.A.

Rector of Alderley, Cheshire.

Printed for J., G., and F. Rivington, St. Paul's Churchyard and Waterloo Place, Pall Mall.

Lately published, by the same Author,

Seven Sermons on the Church Catechism, with especial Reference to the Ordinance of Confirmation. 12mo. 2s. 6d.

In 8vo. price 9s. in boards,

AN INTRODUCTION to the CRITICAL STUDY of ECCLESIASTICAL HISTORY, attempted in an Account of the Progress, and a short Notice of the Sources, of the History of the Church.

By JOHN GOULTER DOWLING, M.A.

Of Wadham College, Oxford; Rector of St. Mary-de-Crypt, Gloucester.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

WILBERFORCE'S PRIZE ESSAY.

In small 8vo. price 3s. 6d. boards,

THE PAROCHIAL SYSTEM. An Appeal to English Churchmen.

By HENRY WILLIAM WILBERFORCE, M.A.

Curate of Bransgore, Hants.

*** To this Essay the Prize of Two Hundred Guineas has been adjudged, by the Rev. Dr. Dealtry and the Rev. Professor Scholefield.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

In 8vo. price 1s. 6d.

THE ESSENTIALS of GREEK ACCIDENCE, with Examples for Practice.

By THOMAS KERCHEVOR ARNOLD, M.A.

Rector of Lyndon, and late Fellow of Trinity College, Cambridge.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

Lately published, by the same Author,

A Practical Introduction to Greek Prose Composition. 8vo. 5s. 6d. cloth boards.

In small 8vo. price 3s. 6d. in boards,

NOT TRADITION, but REVELATION.

By PHILIP N. SHUTTLEWORTH, D.D.

Warden of New College, Oxford; and Rector of Foxley, Wilts.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

Also, by the same Author,

1. A Paraphrastic Translation of the Apostolical Epistles, with Notes. 3d edition, 8vo. 12s.
2. Sermons on some of the Leading Principles of Christianity. 2 vols. 8vo. 1l. 4s.
3. The Consistency of the Whole Scheme of Revelation with Itself and with Human Reason. Small 8vo. 6s.

REV. JAMES SLADE'S WORKS.

FAMILY READINGS from the GOSPEL of ST. JOHN. Adapted, also, to the Use of Teachers in Sunday Schools. 12mo. 3s. 6d. boards.

2. A System of Family Prayer, for each Morning and Evening of the Week. 12mo. 3s. 6d. boards.
3. Plain Parochial Sermons, preached in the Parish Church of Bolton-le-Moors. 2d edition, in 3 vols. 12mo. 6s. each.
4. Twenty-One Prayers, composed from the Psalms, for the Sick and Afflicted. To which are added, various other Forms of Prayer for the same purpose. With a few Hints and Directions on the Visitation of the Sick, chiefly intended for the Use of the Clergy. 3d edition, 12mo. 3s. 6d. boards.
5. Plain Remarks on the Four Gospels, for the Benefit of Uninstructed Persons, and adapted to the Use of Schools and Families. 12mo. 3s. 6d. boards.
6. Annotations on the Epistles; being a Continuation of Mr. Elsley's Annotations on the Gospels and Acts. 4th edition, 2 vols. 8vo. 18s.

By the Rev. JAMES SLADE, M.A.

Vicar of Bolton, and Prebendary of Chester.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

In 8vo. price 2s. 6d. in cloth boards,

JOB; or, the Gospel Preached to the Patriarchs. Being a Paraphrase on the last Ten Chapters of the Book of Job.

By the WIDOW of a CLERGYMAN of the CHURCH of ENGLAND.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

In 12mo. price 4s. 6d. in cloth, lettered,

A VOLUME for a LENDING LIBRARY.

By GEORGE DAVYS, D.D.

Dean of Chester.

*** The Selections contained in this Volume have, most of them, appeared in "The Cottager's Monthly Visitor."

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

The Holy Bible Chronologically Arranged.

Handsomely printed in Four large Vols. 8vo. price 3l. 6s. in boards, a new edition, with Marginal References, of

THE OLD and NEW TESTAMENT, arranged in Historical and Chronological Order, in such manner that the Books, Chapters, &c. &c. may be read as one connected History, in the very Words of the authorised Translation. With copious Notes and Indexes.

By the Rev. GEORGE TOWNSEND, M.A.

Prebendary of Durham, and Vicar of Northallerton.

Printed for J., G., and F. Rivington, St. Paul's Churchyard, and Waterloo Place, Pall Mall.

*** The Old and New Testaments may be purchased separately; and the same Work, with short Notes, may be had in one large volume, price 1l. 4s. in boards.

NEW PEERS.

DEBRETT'S COMPLETE PEERAGE, improved.

By W. COURTHOPE, Esq.

This Edition (the 23d) includes the New Peers, with a Portrait of Her Majesty, beautifully engraved by Dean. The Arms, drawn by Harvey purposely for this Work, are now incorporated with the text. In one handsome volume, price 1l. 8s. in cloth, and lettered.

London: Printed for J., G., and F. Rivington; Longman and Co.; J. and W. T. Clarke; T. Cadell; John Richardson; J. M. Richardson; Baldwin and Cradock; S. Bagster; J. Booker; J. Booth; Hatchard and Son; Hamilton and Co.; Sherwood and Co.; Allen and Co.; E. Hodgson; W. Pickering; T. and W. Boone; Houlston and Son; J. Templeman; and L. A. Lewis.

F.cap. 4s. cloth,

ESSAYS on the APOCALYPSE, with Illustrations from English History. 2d edition, with considerable Additions.

By R. B. SANDERSON.

London: Simpkin, Marshall, and Co. Newcastle: Finlay and Charlton. Edinburgh: Oliphant and Co. Dublin: W. Curry, and Co.

---

1 large vol. 8vo. cloth boards, lettered, price 1l. 4s.

CHEMISTRY of ORGANIC BODIES: Vegetables.

By THOMAS THOMSON, M.D.

Regius Professor of Chemistry in the University of Glasgow.

Elements of Chemistry, including the Applications of the Science to the Arts. By Professor Thomas Graham. Parts I. and II. 8vo. price 4s.

Part III. will shortly appear.

London: J. B. Baillière, Bookseller and Publisher, 219 Regent Street.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Price 16s. 6d.

THE REPORT of the SEVENTH MEETING of the BRITISH ASSOCIATION for the ADVANCEMENT of SCIENCE, held at Liverpool, in 1837.

John Murray, Albemarle Street.

6th edition, with Illustrations, and a List of the Governors, 12mo. cloth, 4s.

A BRIEF HISTORY of CHRIST'S HOSPITAL, from its Foundation by King Edward the Sixth.

By J. J. WILSON.

John Van Voorst, 1 Paternoster Row.

Under the Superintendence of the Society for the Diffusion of Useful Knowledge.

THE PENNY MAGAZINE, Part LXXVII. price 6d.

Six Volumes of "The Penny Magazine" have been completed, and may be had, uniformly bound in cloth, price 7s. 6d. each, except Vol. I. which is 6s.

The Penny Cyclopædia, Part LXVIII. price 1s. 6d.

Eleven Volumes are now published, price 7s. 6d. each, uniformly bound in cloth, and may be obtained through every Bookseller.

The Twelfth Volume will be completed early in September.

The Penny Cyclopædia, Vol. V. Part I. price 5s. A re-issue of the "Penny Cyclopædia" in Half-volumes has been undertaken, as by this arrangement new Subscribers, by a moderate periodical outlay, will be enabled to complete the Work simultaneously with the Purchasers of the current Edition.

A Statistical Account of the British Empire, by J. R. M'Culloch. 2d edition, corrected and enlarged, Part V. price 5s. Part IV. completed the First Volume.

The Work will be completed in Eight Parts, forming Two thick closely printed 8vo. Volumes.

London: Charles Knight and Co. Ludgate Street.

THE QUARTO PICTORIAL BIBLE, Part IX. price 5s. to be completed in about Sixteen Monthly Parts, forming Four handsome Volumes.

The First and Second Volumes have been completed, and may be had, bound in cloth, price 1l. 2s. 6d. each.

The Pictorial Edition of the Book of Common Prayer, with Original Notes, by the Rev. Henry Stebbing, M.A. Part XII. which completes the Work, price 2s. 6d. containing numerous Woodcut Illustrations.

The Pictorial History of England, Part XIX. price 2s. The Work is also published in Weekly Numbers, price 6d. each.

The First Volume is published, handsomely bound in cloth, price 1l. 4s. It comes down to the end of the reign of Richard II. and contains upwards of 500 Woodcut Illustrations.

The Portrait Illustrations of the Pictorial History of England, Part VII. price 2s. to be completed in Twenty Monthly Parts. The Portraits contained in Part VII. are—Hampden, Dryden, Locke, Ray, and Somers.

The Arabian Nights' Entertainments. A new Translation, by E. W. Lane, with numerous Woodcut Illustrations, after Designs by W. Harvey. Part V. price 2s. 6d. To be completed in Three Volumes.

The Journal of the Statistical Society of London. No. V. price 1s. 6d.

London: Charles Knight and Co. Ludgate Street.

---

8 *New Burlington Street, Sept.* 1.

MR. BENTLEY'S NEW PUBLICATIONS, now ready.

I.

The Marquess of Londonderry's Tour in the North of Europe, in 1836-7.

Dedicated to the Right Hon. Sir Robert Peel, Bart. M.P.

2 vols. 8vo. with Portraits and other Engravings.

II.

A Romance of Vienna.

By Mrs. Trollope,

Author of "Vienna and the Austrians," "Vicar of Wrexhill," &c. 3 vols.

III.

The concluding Volumes of

Mr. James's Life and Times of Louis the Fourteenth.

(Vols. III. and IV.) Embellished with many fine Portraits.

IV.

The Last Days of Aurelian;

Or, the Nazarenes of Rome. A Romance.

By the Author of "Zenobia, Queen of the East."

2 vols. 12s.

V.

New Zealand: Travels and Adventures during a Residence in that Country,

From the Year 1831 to 1837.

By J. S. Polack, Esq.

2 vols. 8vo. with Map and numerous other Engravings.

VI.

THE NEW VOLUME OF "THE STANDARD NOVELS," "MY LIFE,"

By the celebrated Author of "Stories of Waterloo."

With the Magazines, complete in 1 vol. embellished with Engravings,

Mr. Maxwell's "Captain Blake; or, My Life,"

For Six Shillings!

(Just ready.)

VII.

Land Sharks and Sea Gulls; a Novel.

By Captain Glascock, R.N.

Author of "The Naval Sketch-Book," "Tales of a Tar," &c.

3 vols. with Illustrations by George Cruikshank.

(On the 10th instant.)

VIII.

Memoirs and Correspondence of Admiral Lord de Saumarez.

By Capt. Sir John Ross, R.N. C.B.

2 vols. 8vo. with numerous Plates.

IX.

Travels in the Three Great Empires of Austria, Russia, and Turkey,

Including

A Voyage down the Danube, with Travels in Hungary, Wallachia, Moldavia, Bessarabia, Southern Russia, Crim Tartary, Turkey in Europe, Syria, Palestine, Asia Minor, the Country East of Jordan, and a Visit to the Apocalyptic Churches, and the Islands of the Archipelago.

By C. B. Elliott, M.A.

Author of "Travels in the North of Europe."

2 vols. 8vo. (On the 11th instant.)

Richard Bentley, New Burlington Street, Publisher in Ordinary to Her Majesty.

The September Number of

BENTLEY'S MISCELLANY, embellished with Illustrations by George Cruikshank, contains—

Full Report of the Second Meeting of the Mudfog Association for the Advancement of Every Thing. By the Editor, Charles Dickens, Esq. ("Boz")

Her Majesty's Portraits, and Queen Elizabeth's Edict

A Chapter on Gourmanderie. By the Author of a "Parisian Sabbath."

Rapp's Epitaph

Sir Isaac Newton and his Mistress. By George Cruikshank

An Extraordinary Profession

Walter Childe. By Mr. Buller, of Brazen Nose

Pasquale; a Tale of Italy. By Captain Medwin

A Night on the Enchanted Mountains. By C. F. Hoffman, author of "A Winter in the Far West"

Grouse Shooting. By an Old Sportsman

Impromptu Sermonet. By the Rev. Sydney Smith

The Abbot and the Black Penitent

Cupid and Jupiter. By W. B. Le Gros

A Cambridge "Row" in the Year 1638

Day Dreams

More Peculiarities of Uncle Sam

Anacreon made Easy. By Mr. Buller, Jun.

Chorus of Bubble Buyers (Paper Money Lyrics), &c. &c.

Richard Bentley, New Burlington Street.

*** Orders received by all Booksellers.

PHILOSOPHICAL AND CHEMICAL INSTRUMENTS.

Price 1s. a new and enlarged edition of

WATKINS and HILL'S DESCRIPTIVE CATALOGUE, with Prices affixed, of the numerous Instruments and Apparatus constructed by them for the investigation and illustration of Experimental Philosophy and Chemistry.

To be had at Watkins and Hill's Establishment, 5 Charing Cross, London, and of all Booksellers.

A liberal abatement from the Catalogue Prices made to Scientific Institutions, Public Teachers, Merchants, &c.

Also, may be had, price 2s. 6d.

A Popular Introduction to Experimental Chemistry; containing a Description of the Apparatus required for Conducting those Processes which first claim the attention of Chemical Students, elucidated by numerous Figures and easy Experiments.

13 *Great Marlborough Street, Sept.* 1.

MR. COLBURN'S NEW PUBLICATIONS.

I.

LORD LINDSAY'S LETTERS

On EGYPT, EDOM, and the HOLY LAND. In 2 vols. small 8vo. with Illustrations, 24*s.* bound.

"Lord Lindsay has lost no opportunity of pointing out the literal fulfilment of prophecy, as displayed in the actual condition of Egypt, Edom, and Syria; and his observations on the subject deserve the attention of biblical critics, especially as his lordship has avoided hypothetical and forced interpretations."—*Athenæum.*

II.

GUIDE TO THE SPAS OF GERMANY.

By Dr. GRANVILLE, Author of "Travels to St. Petersburg," &c.

NEW AND CHEAPER EDITION, COMPLETE IN ONE VOLUME,

With 38 Illustrations, price only 18*s.* bound.

"This attractive work presents the narrative of a grand tour to all the celebrated and fashionable mineral watering-places of Germany—a tour in which amusement is blended with information, and descriptive sketches of the humours and fancies of each Spa are mixed up with all the accurate details of every thing that is valuable in a medical or social point of view."—*Globe.*

III.

DUTY AND INCLINATION.

Edited by MISS LANDON, Authoress of "Ethel Churchill," "The Improvvisatrice," &c.

IV.

THE SPIRIT OF THE EAST.

ILLUSTRATED in a JOURNAL of TRAVELS through ROUMELI, during an EVENTFUL PERIOD.

By D. URQUHART, Esq. Author of "Turkey and its Resources." 2 vols. 8vo. 28*s.*

"A work which, displaying the result of ten years of observation in scenes of war and peace, wherein the author took a prominent part as a scholar, a soldier, a mediator, and a diplomatist, presents views and observations calculated not only to produce a material and beneficial effect upon the moral, commercial, and political condition of the populations of Europe and Asia, but to lead to the mutual appreciation by each of the errors by which both have been misled, whilst offering the means through which the excellences of each may henceforth be estimated and exchanged."—*Times.*

V.

THE HEIR OF SELWOOD.

By MRS. GORE, Authoress of "Mrs. Armytage," "Stokeshill Place," &c. 3 vols. (Just ready.)

VI.

EXPEDITION OF DISCOVERY INTO THE INTERIOR OF AFRICA, IN 1837,

Through the Countries of the Great Namaquas, Boschmans, and Hill Damaras, under the auspices of the British Government and the Royal Geographical Society.

By Sir J. E. ALEXANDER, K.L.S. &c. In 2 vols. post 8vo. with Map and numerous Illustrations, 21*s.* bound.

"In this narrative we find Sir James Alexander, as hitherto, lively and entertaining. Struggling through some 4000 miles of a wild and savage country, he has greatly enlarged the bounds of our geographical knowledge, and done much towards the accumulation of natural history; but the chief interest of the work lies in its personal adventures and vicissitudes, the gallant captain having encountered all the dangers of lion, elephant, rhinoceros, gnu, ostrich, and baboon combat."—*Literary Gazette.*

VII.

THE GLANVILLE FAMILY.

By a LADY of RANK. 3 vols.

"A novel combining, in a very remarkable manner, the spirit and satiric wit of Mrs. Gore, with the hitherto unrivalled truth and simplicity of the late Miss Austin."

VIII.

THE CONCLUDING PART OF

THE ORIGINAL EDITION OF MR. BURKE'S HISTORY OF THE LANDED GENTRY.

Price 7*s.* 6*d.*

This important Work comprises Accounts of all the eminent Families in the Kingdom, and upwards of 100,000 Individuals connected with them.
N.B. Due notice will be given of the period of publication of the Last Part of the Small Paper Edition.

IX.

STANDARD NOVELS FOR SIX SHILLINGS EACH.

Now ready, complete in 1 vol. containg 600 pages, with Two Illustrations, price 6*s.* bound,

MR. HOOK'S SAYINGS AND DOINGS.

SECOND SERIES. Forming the New Volume of COLBURN'S MODERN NOVELISTS. A select Collection of the best Works of Fiction of the most distinguished Writers.

Works already published in this Collection, either of which may be had separately, bound, and embellished with Portraits of the Authors, &c. by the Findens, &c., price only 6*s.* each:—

Mr. Hook's Sayings and Doings, First Series.
Mr. Bulwer's Pelham.
Mr. Bulwer's Devereux.

Mr. Bulwer's Disowned.
Mr. Ward's Tremaine.
Captain Marryat's Frank Mildmay.

Lady Morgan's O'Donnel.
Mr. Lister's Granby.
Mr. Horace Smith's Brambletye House.

Printed by JAMES MOYES, of Brook Green, Hammersmith, in the County of Middlesex, Printer, at his Printing Office, Number 29 Castle Street, Leicester Square, in the said County: and published by WILLIAM ARMIGER SCRIPPS, of Number 19 South Molton Street, in the Parish of Saint George, Hanover Square, in the County aforesaid, at the LITERARY GAZETTE OFFICE, Number 7 Wellington Street, Waterloo Bridge, Strand, in the said County, on Saturday, September 1st, 1838.